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SUBSIDIARY BODY FOR SCIENTIFIC AND TECHNOLOGICAL ADVICE
Sixteenth session
Bonn, 5 - 14 June 2002
Item 2 (a) of the provisional agenda

PROVISIONAL AGENDA AND ANNOTATIONS

Note by the Executive Secretary

I. INTRODUCTION

1. Arrangements have been made for the sixteenth session of the Subsidiary Body for Scientific and Technological Advice (SBSTA) to be held at the Maritim Hotel, Bonn, in the period from 5 to 14 June 2002.

II. PROVISIONAL AGENDA

2. The provisional agenda for the sixteenth session of the SBSTA, proposed after consultation with the Chairman, is as follows:

1. Opening of the session.
2. Organizational matters:
   - (a) Adoption of the agenda;
   - (b) Organization of the work of the session.
3. Third Assessment Report of the Intergovernmental Panel on Climate Change.
4. Methodological issues:
   - (a) Guidelines on reporting and review of greenhouse gas inventories from Parties included in Annex I to the Convention (implementing decisions 3/CP.5 and 6/CP.5);
   - (b) Guidelines under Articles 5, 7 and 8 of the Kyoto Protocol;
   - (c) Activities implemented jointly under the pilot phase: uniform reporting format;
   - (d) Development of good practice guidance and other information for land use, land-use change and forestry;

(e) Land use, land-use change and forestry: definitions and modalities for including afforestation and reforestation activities under Article 12 of the Kyoto Protocol.

5. Development and transfer of technologies.

6. Relationship between efforts to protect the stratospheric ozone layer and efforts to safeguard the global climate system: issues relating to hydrofluorocarbons and perfluorocarbons.

7. "Good practices" in policies and measures.

8. Cooperation with relevant international organizations.

9. Article 6 of the Convention: education, training and public awareness.

10. Other matters:

(a) Special circumstances of Croatia under Article 4, paragraph 6, of the Convention;

(b) Proposal on cleaner or less greenhouse gas-emitting energy;

(c) Matters referred to the Subsidiary Body for Scientific and Technological Advice by the Subsidiary Body for Implementation;

11. Report on the session.

III. ANNOTATIONS TO THE PROVISIONAL AGENDA

1. Opening of the session

3. The sixteenth session of the SBSTA is scheduled to be opened by the Chairman at 10 a.m. on Wednesday, 5 June 2002.

2. Organizational matters

(a) Adoption of the agenda

4. The provisional agenda for the sixteenth session of the SBSTA will be presented for adoption.

(b) Organization of the work of the session

5. Parties are invited to refer to the proposed schedule of work contained in annex II to this document and to consult the Daily Programme, published during the session, for a more detailed and updated schedule of work of the SBSTA.

3. Third Assessment Report of the Intergovernmental Panel on Climate Change

6. **Background:** The SBSTA, at its fifteenth session, noted with appreciation information provided by the Intergovernmental Panel on Climate Change (IPCC) in the Third Assessment Report (TAR)[1], and

[1] See also decision 25/CP.7 in FCCC/CP/2001/13/Add.4.

information contained in document FCCC/SBSTA/2001/INF.6. The SBSTA invited Parties to provide their views on the TAR and possible IPCC activities in support of the needs of the Convention and its Kyoto Protocol (FCCC/SBSTA/2001/8, para. 12 (c)). Submissions from Parties are contained in document FCCC/SBSTA/2002/MISC.5.

7. The SBSTA also requested the secretariat to organize, prior to the sixteenth session of the SBSTA, a workshop to explore information contained in the TAR and how the content of the TAR can facilitate the work of the SBSTA and other Convention bodies. It further requested the secretariat to prepare a report on that workshop for consideration by the SBSTA at its sixteenth session (FCCC/SBSTA/2001/8, para. 12 (d) and (e)). The workshop took place from 4 to 6 April in Bonn. The report on the workshop is contained in document FCCC/SBSTA/2002/INF.4.

8. **Action:** The SBSTA may wish to take note of information contained in documents FCCC/SBSTA/2002/INF.4 and FCCC/SBSTA/2002/MISC.5. Parties are invited to come prepared to discuss further how the content of the TAR can facilitate the work of the SBSTA and other Convention bodies.

4. Methodological issues

(a) Guidelines on reporting and review of greenhouse gas inventories from Parties included in Annex I to the Convention (implementing decisions 3/CP.5 and 6/CP.5)

9. **Background:** The Conference of the Parties (COP), by its decision 34/CP.7, deferred consideration of the guidelines for reporting of greenhouse gas inventories from Parties included in Annex I to the Convention (Annex I Parties) until the sixteenth session of the SBSTA with a view to recommending a decision to the COP for adoption at its eighth session. The COP, by its decision 6/CP.5, decided that the revision of the review guidelines shall be considered with a view to submitting a decision for adoption by the COP at its eighth session.

10. The SBSTA, at its fifteenth session, took note of information contained in documents FCCC/SBSTA/2001/5 and Add.1, FCCC/SBSTA/2001/MISC.4, FCCC/SBSTA/2001/MISC.5 and FCCC/SBI/2001/12 relating to the experience gained in the use of the reporting and review guidelines and the IPCC good practice guidance[2] during the trial period.

11. The SBSTA welcomed the organization of an expert meeting by the secretariat on the methodological and operational aspects of the guidelines (FCCC/SBSTA/2001/8, para. 15 (b)). The aim of this expert meeting was to assess further the experience gained during the trial period in the use of the guidelines and to consider possible ways of revising them. The expert meeting was held from 4 to 6 December 2001 in Bonn. Sixty experts, from 41 Parties, provided technical and methodological recommendations which are contained in the report of the expert meeting (FCCC/SBSTA/2002/2).

12. Draft revised review and reporting guidelines, including tables of the common reporting format (CRF), have been prepared on the basis of the outcome of the expert meeting and experience in the use of both guidelines. The draft revised review guidelines are contained in document FCCC/SBSTA/2002/2/Add.1, and the draft revised reporting guidelines and revised tables of the CRF are contained in document FCCC/SBSTA/2002/2/Add.2 and Add.3, respectively. Information on the experience of the secretariat in coordinating the implementation of the review guidelines is provided in document FCCC/SBSTA/2002/5, which supplements document FCCC/SBI/2001/12. The review reports

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[2] The "IPCC good practice guidance" refers to the IPCC report entitled *IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories*.

of GHG inventories, submitted in 2000 and 2001 and reviewed in accordance with the provisions of decision 6/CP.5, can be found on the web site of the secretariat.[3]

13. **Action:** The SBSTA may wish to consider the information in documents FCCC/SBSTA/2002/2 and Add.1 to 3, FCCC/SBSTA/2002/5 and FCCC/SBI/2001/12. Parties are invited to come prepared to consider the revised guidelines with a view to reaching agreement and forwarding corresponding decisions to the COP for adoption at its eighth session. Parties may wish to note that an agreement on the revised guidelines during the sixteenth session of the SBSTA could facilitate their early implementation.

(b) Guidelines under Articles 5, 7 and 8 of the Kyoto Protocol

14. At the conclusion of the seventh session of the COP several sections of the guidelines under Articles 5, 7 and 8 were not completed, mainly because of the need to ensure coherence with other decisions. This session of the SBSTA will attempt to advance work on these sections of the guidelines.

(i) Good practice guidance and adjustments under Article 5, paragraph 2, of the Kyoto Protocol

15. **Background:** The COP, by its decision 21/CP.7, requested the secretariat to organize a workshop prior to, and one or more workshops after, the sixteenth session of the SBSTA on methodologies for adjustments under Article 5, paragraph 2. The purpose of the first workshop is to elaborate draft technical guidance on methodologies for adjustments for consideration by the SBSTA at its sixteenth session. This workshop took place from 3 to 5 April in Athens, Greece. The report of the workshop is contained in document FCCC/SBSTA/2002/INF.5. The COP also requested the SBSTA to complete technical guidance on this issue, in time for consideration by the COP at its ninth session, with a view to recommending a decision for adoption by the COP serving as the meeting of the Parties to the Kyoto Protocol at its first session (COP/MOP 1).

16. **Action:** The SBSTA may wish to take note of information provided in document FCCC/SBSTA/2002/INF.5. Parties are invited to come prepared to provide guidance for the continuation of the work on adjustments, including the scope of a second workshop.

(ii) Guidelines for the preparation of the information required under Article 7 and for review under Article 8 of the Kyoto Protocol

17. **Background:** The COP, by its decision 22/CP.7, on the preparation of the information under Article 7 of the Kyoto Protocol, requested the SBSTA, at its sixteenth session, to elaborate further the sections on information on assigned amounts and information on national registries contained in the appendix to the decision. The COP, by its decision 23/CP.7, on guidelines for review under Article 8, requested the SBSTA to elaborate further part III (Review of information on assigned amounts) and part V (Review of national registries), as contained in appendix I to this decision. The document FCCC/SBSTA/2002/INF. 3 contains a proposal by the secretariat for completing these sections and parts.

18. The COP, at its seventh session, also decided that there shall be an expedited procedure for the review relating to the reinstatement of eligibility of an Annex I Party to use the mechanisms established under Articles 6, 12 and 17 of the Kyoto Protocol. The COP, by its decision 23/CP.7, requested the SBSTA at its sixteenth session, to elaborate the procedures, timing and reporting for the review under Article 8 of information for the reinstatement of eligibility to use the mechanisms under Articles 6, 12 and 17, as contained in appendix II to the decision The COP invited Parties to submit their views to the secretariat on this matter. Submissions are contained in document FCCC/SBSTA/2002/MISC.8.

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[3] See www.unfccc.int/resource/ghg/tempemis2.html.

19. Decisions 22/CP.7 and 23/CP.7 request the SBSTA to elaborate those sections of the guidelines described in paragraphs 17 and 18 above with a view to recommending to the COP, at its eighth session, decisions for adoption by COP/MOP 1.

20. The COP, by its decision 22/CP.7, urged each Annex I Party which is also a Party to the Kyoto Protocol to submit, by 1 January 2006, a report to provide the COP/MOP with the basis for reviewing the demonstration of progress by 2005, in accordance with Article 3, paragraph 2, of the Kyoto Protocol. The content of this report is described in paragraph 4 of this decision. The COP requested the SBSTA, at its sixteenth session, to consider how this information should be presented and evaluated taking into account document FCCC/CP/2001/MISC.2 and other relevant submissions by Parties, with a view to recommending a decision on this matter for adoption by the COP at its eighth session.

21. The COP, by its decision 23/CP.7, requested the secretariat to prepare a document containing an analysis of the practices of other international treaty bodies and organizations on the treatment of confidential information, for consideration by the SBSTA at its sixteenth session. This information is contained in document FCCC/TP/2002/2.

22. **Action:** The SBSTA may wish to take note of information provided in documents FCCC/SBSTA/2002/MISC 2, FCCC/SBSTA/2002/INF.3 and FCCC/TP/2002/2. Parties are invited to come prepared to complete the pending parts of the guidelines relating to reporting and review of assigned amounts and reinstatement of eligibility, and to elaborate a draft decision relating to the presentation and evaluation of information for reviewing demonstrable progress by 2005.

(iii) Technical standards for registries under Article 7, paragraph 4, of the Kyoto Protocol

23. **Background:** The COP, by its decision 19/CP.7, requested the SBSTA to develop technical standards for the purpose of ensuring the accurate, transparent and efficient exchange of data between national registries, the clean development mechanism (CDM) registry and the transaction log, with a view to recommending to the COP, at its eighth session, a decision on this matter, for adoption by COP/MOP 1, to facilitate the early development and establishment of national registries, as well as of the CDM registry and transaction log. The COP further requested the secretariat to develop the transaction log, with a view to establishing it no later than the second session of the COP/MOP.

24. By the same decision, the COP also requested the Chairman of the SBSTA, with the assistance of the secretariat, to convene inter-sessional consultations with Parties and experts for the purposes of preparing draft technical standards, for consideration by the SBSTA at its sixteenth and seventeenth sessions, and providing for the exchange of information and experience between Annex I Parties and Parties not included in Annex I to the Convention (non-Annex I Parties) as well as the secretariat, in relation to the development and establishment of national registries, the CDM registry and the transaction log. Such consultations will take place at a workshop to be held from 2 to 3 June in Bonn, Germany. A report on the consultations will be contained in document FCCC/SBSTA/2002/INF.2 and will be available during the sixteenth session of the SBSTA.

25. **Action:** The SBSTA may wish to take note of information provided in document FCCC/SBSTA/2002/INF.2 and to provide further guidance, as necessary.

(c) Activities implemented jointly under the pilot phase: uniform reporting format

26. **Background:** The COP, by its decision 8/CP.7, decided to continue the pilot phase for activities implemented jointly. It requested the secretariat to organize a workshop on the draft revised uniform reporting format (URF) before the sixteenth sessions of the subsidiary bodies. This workshop will take place from 2 to 3 June in Bonn. A report on the workshop will be contained in document FCCC/SBSTA/2002/INF.9 and will be available during the sixteenth session of the SBSTA.

27. The SBSTA, at its fifteenth session, invited Parties to submit their views on their experience with the pilot phase of activities implemented jointly (FCCC/SBSTA/2001/8, para. 47). Submissions from Parties are contained in document FCCC/SBSTA/2002/MISC.2.

28. **Action:** The SBSTA may wish to take note of information provided in documents FCCC/SBSTA/2002/INF.9 and FCCC/SBSTA/2002/MISC.2. Parties may wish to further consider the draft revised URF and to prepare a recommendation for the COP at its eighth session, as appropriate.

(d) Development of good practice guidance and other information for land use, land-use change and forestry

29. **Background:** The SBSTA, at its fifteenth session, welcomed the work programme on land use, land-use change and forestry (LULUCF) proposed by the IPCC, particularly work relating to the development of LULUCF-related definitions and on factoring out direct human-induced changes in carbon stocks (FCCC/SBSTA/2001/8, para. 29). The SBSTA invited the IPCC to report at its next session and periodically thereafter on the progress of its work.

30. The Food and Agriculture Organization of the United Nations (FAO), the IPCC, the Centre for International Forestry Research and the International Union of Forest Research Organizations jointly organized an expert meeting in Rome, Italy, from 23 to 25 January, to assist in harmonizing forest-related definitions for use by various stakeholders. The aim of the meeting was to initiate a process to improve coherence among definitions used by different international bodies.

31. Also, the COP, by its decision 11/CP.7, decided to consider biome-specific forest definitions at its tenth session. A technical paper on this subject is contained in document FCCC/TP/2002/1. This subject will be discussed at a future session.

32. A representative of the IPCC will make a statement on progress relating to the development of good practice guidance for land use, land-use change and forestry. A representative of FAO will provide the SBSTA with information on the workshop relating to forest definitions.

33. **Action:** The SBSTA may wish to take note of information provided by the IPCC relating to the development of good practice guidance and by the FAO relating to definitions.

(e) Land use, land-use change and forestry: definitions and modalities for including afforestation and reforestation activities under Article 12 of the Kyoto Protocol

34. **Background:** The COP, by its decisions 11/CP.7 and 17/CP.7, requested the SBSTA to develop definitions and modalities for including afforestation and reforestation project activities under the CDM in the first commitment period, taking into account the issues of non-permanence, additionality, leakage, uncertainties and socio-economic and environmental impacts, including impacts on biodiversity and natural ecosystems, and being guided by the principles in the preamble to draft decision -/CMP.1, attached to decision 11/CP.7. It called for terms of reference and an agenda for this work to be developed by the SBSTA at its sixteenth session.

35. The COP, by its decision 17/CP.7, requested the secretariat to organize a workshop with the aim of recommending the terms of reference and an agenda for the work to be carried out. It invited Parties to submit views on the organization of the workshop, the terms of reference and the agenda. Submissions from Parties are contained in document FCCC/SBSTA/2002/MISC.1. The workshop took place from 7 to 9 April in Orvieto, Italy. The report of the workshop is contained in document FCCC/SBSTA/2002/4.

36. **Action:** The SBSTA may wish to take note of information provided in documents FCCC/SBSTA/2002/4 and FCCC/SBSTA/2002/MISC.1. Parties are invited to come prepared to complete the terms of reference and the agenda for the work.

5. Development and transfer of technologies

37. **Background:** The SBSTA, at its fifteenth session, invited Parties to provide their views on a proposal for a technology transfer clearing house and international information network (FCCC/TP/2001/2), issues identified in the annex to the progress report (FCCC/SBSTA/2001/4), the roles of Parties in supporting a technology information system developed by the secretariat and on the experience of Parties with testing the system (FCCC/SBSTA/2001/8, para. 33 (c)). Submissions from Parties are contained in document FCCC/SBSTA/2002/MISC.12.

38. The SBSTA, at the same session, requested the secretariat to continue its work on the technology information system. It also requested the secretariat, under the guidance of the Chairman, to organize an expert workshop on technology information. It further requested the secretariat to organize a preparatory meeting of the expert group on technology transfer to enable it to develop a programme of work for further consideration by the SBSTA at its sixteenth session (FCCC/SBSTA/2001/8, para. 33 (e)).

39. The COP, by its decision 4/CP.7, decided to establish an expert group on technology transfer, with the objective of enhancing the implementation of Article 4, paragraph 5, of the Convention and the advancement of technology transfer activities under the Convention. It requested the secretariat to organize an expert meeting to identify methodologies needed to undertake technology needs assessments, and to report its findings to the SBSTA at its sixteenth session.

40. The expert workshop on technology information was held from 18 to 19 April 2001 in Beijing, China. A report on the workshop is contained in document FCCC/SBSTA/2002/INF.6. The preparatory meeting of the expert group on technology transfer was held on 22 April, and the expert meeting on methodologies for technology needs assessments was held from 23 to 25 April, both in Seoul, Republic of Korea. A report on the meeting is contained in document FCCC/SBSTA/2002/INF.7. The Chairman of the expert group on technology transfer will provide an oral report to the SBSTA on the outcome of its meeting. The first meeting of the expert group on technology transfer will take place in conjunction with the SBSTA at its sixteenth session in Bonn.

41. **Action**: The SBSTA may wish to take note of information contained in documents FCCC/SBSTA/2002/INF.6, FCCC/SBSTA/2002/INF.7 and FCCC/SBSTA/2002/MISC.12. The SBSTA may wish to consider the outcome of the above meetings, with a view to providing further guidance to the expert group and the secretariat.

6. Relationship between efforts to protect the stratospheric ozone layer and efforts to safeguard the global climate system: issues relating to hydrofluorocarbons and perfluorocarbons

42. **Background:** The SBSTA, at its fifteenth session, recalled decision 17/CP.5 on this subject. It noted information contained in document FCCC/SBSTA/1999/MISC.6 and Add.1 and 2 and on the UNFCCC web site, and encouraged Parties included in Annex I to the Convention, the relevant bodies of the Montreal Protocol, the IPCC, intergovernmental organizations and non-governmental organizations to update further the information on available and potential ways and means of limiting emissions of hydrofluorocarbons and perfluorocarbons, including their use as replacements for ozone-depleting substances.[4]

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[4] http://www.unfccc.int/program/wam/index.html.

43. The SBSTA invited Parties to provide their views on information aspects noted in decision 17/CP.5. Submissions from Parties are contained in document FCCC/SBSTA/2002/MISC.6. It requested the secretariat to prepare a document drawing upon information received for consideration by the SBSTA at its sixteenth session (FCCC/SBSTA/2001/8, para. 56 (b) to (d)). Information on this matter is contained in document FCCC/SBSTA/2002/INF.1.

44. **Action:** The SBSTA may wish to take note of information provided in documents FCCC/SBSTA/2002/INF.1 and FCCC/SBSTA/2002/MISC.6 and to provide additional guidance to the secretariat on this matter, as appropriate.

7. "Good practices" in policies and measures

45. **Background:** The SBSTA, at its fifteenth session, took note of the Chairman's report (FCCC/SBSTA/2001/INF.5) on the workshop on "good practices" in policies and measures held in Copenhagen, Denmark, from 8 to 10 October 2001, pursuant to the request by the COP at the first part of its sixth session.[5] The SBSTA decided to consider further the workshop report and any further action to be undertaken to advance the work on "good practices" in policies and measures, in implementing decision 13/CP.7, at its sixteenth session. It invited Parties to submit their views on such possible action. Submissions from Parties are contained in document FCCC/SBSTA/2002/MISC.7. The SBSTA requested the secretariat to compile information on the policies and measures reported by Annex I Parties in their third national communications, for consideration at its seventeenth session (FCCC/SBSTA/2001/8, para. 35).

46. **Action:** The SBSTA may wish to consider information contained in documents FCCC/SBSTA/2001/INF.5 and FCCC/SBSTA/2002/MISC.7. Parties are invited to come prepared to identify action to be taken to advance the work on "good practices" in policies and measures.

8. Cooperation with relevant international organizations

Cooperation with scientific organizations

47. **Background:** The SBSTA, at its fifteenth session, noted information contained in document FCCC/SBSTA/2001/MISC.9 and welcomed the statement by the Director of the Global Climate Observing System (GCOS) secretariat, on behalf of the agencies participating in the Climate Agenda, regarding its activities relating to decisions 14/CP.4 and 5/CP.5. The SBSTA endorsed the preparation by the GCOS secretariat of a second report on the adequacy of the global climate observing systems and invited it to take into account relevant decisions of the COP on capacity building, technology transfer and adaptation. It noted the need to complete the adequacy report in the shortest possible time and invited the GCOS secretariat to prepare, in time for consideration by the SBSTA at its sixteenth session, an interim report on the synthesis and analysis of national reports from Parties (FCCC/SBSTA/2001/8, para. 41 (d)). The interim report is contained in document FCCC/SBSTA/2002/MISC.10.

48. The SBSTA also noted the completion of two regional workshops to identify priority capacity-building needs of developing countries in relation to their participation in systematic observation. It invited the GCOS secretariat to make the follow-up regional action plans available to the SBSTA for consideration at its sixteenth session, with a view to recommending a draft decision on this matter for consideration by the COP at its eighth session. It further encouraged the GCOS secretariat to expedite the remaining programme of regional workshops. The SBSTA urged Parties to work in collaboration with the GCOS secretariat in formulating project proposals to correct deficiencies in global observing systems for climate (FCCC/SBSTA/2001/8, para. 41 (e) and (f)).

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[5] See FCCC/CP/2000/5/Add.2, section III, F.

49. A representative of the GCOS secretariat is expected to provide additional information at the session.

50. **Action**: The SBSTA may wish to take note of information contained in document FCCC/SBSTA/2002/MISC.10, and information provided by GCOS. Parties are invited to come prepared to provide further guidance to the GCOS secretariat on the adequacy report and the follow-up regional action plans and regional workshops, with a view to recommending a draft decision on this matter for consideration by the COP at its eighth session.

Cooperation with other conventions

51. **Background:** The SBSTA, at its fifteenth session, reaffirmed the need for enhanced cooperation between the UNFCCC, the Convention on Biological Diversity (CBD) and the United Nations Convention to Combat Desertification (UNCCD) and took note of the information provided in documents FCCC/SBSTA/2001/MISC.7 and FCCC/SBSTA/2001/MISC.8 and Add.1 and 2 and oral reports from the secretariat, CBD and the UNCCD. The SBSTA invited Parties to submit further views on cooperation with other relevant intergovernmental bodies (FCCC/SBSTA/2001/8, para. 41 (k)). Submissions from Parties are contained in document FCCC/SBSTA/2002/MISC.9.

52. The SBSTA noted with appreciation the report provided by the IPCC on the preparation of a technical paper on the interlinkages between climate change and biodiversity, and encouraged the IPCC to make the findings of this report available to the SBSTA at its sixteenth session. It is expected that the IPCC Bureau, at its 25th session, will consider and approve a final draft of this paper. Subject to this approval, the paper will be made available to delegates and observers at the session. The Convention on Biological Diversity (CBD) established an Ad Hoc Technical Expert Group (AHTEG) to assess interlinkages between biological diversity and climate change. The AHTEG, at its first meeting, from 21 to 25 January in Helsinki, Finland, considered the IPCC paper. The report of this meeting will also be made available to delegates.[6]

53. The SBSTA requested the Joint Liaison Group (JLG) between the secretariats of the UNFCCC, the CBD and the UNCCD to collect and share information on the work programmes and operations of each convention. It also requested the JLG to examine the possibility of holding a joint workshop before the eighteenth session of the SBSTA to explore the issues relating to interlinkages between the three conventions. It further requested the secretariat to report on these activities at its sixteenth session (FCCC/SBSTA/2001/8, para. 41 (n) to (p)). A progress report on the work of the JLG is contained in document FCCC/SBSTA/2002/3.

54. Statements are anticipated from representatives of CBD, the UNCCD and the IPCC with regard to their activities relating to the UNFCCC.

55. **Action**: The SBSTA may wish to take note of information provided in documents FCCC/SBSTA/2002/3 and FCCC/SBSTA/2002/MISC.9, information provided by the IPCC on the technical report, and other information provided by other conventions and the secretariat.

Cooperation with United Nations bodies

56. **Background**: The SBSTA, at its fifteenth session, noted with appreciation the information provided by the World Health Organization (WHO) on its activities relating to climate change. The SBSTA invited WHO to make additional information on this subject available at its sixteenth session.

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[6] See also www.biodiv.org/doc

57. Statements will be made by a representative of the WHO on its activities relating to climate change, and by a representative of the International Maritime Organization on the outcome of the 47th session of the Marine Environment Protection Committee which was held from 4 to 8 March 2002 in London.

58. **Action**: The SBSTA may wish to take note of information provided by WHO and other United Nations bodies.

9. Article 6 of the Convention: education, training and public awareness

59. **Background:** The SBSTA, at its fifteenth session, recognized the need to disseminate the results of the IPCC TAR, generally and in popularized versions intended for the general public, and requested the secretariat to report, at its sixteenth session, on related efforts (FCCC/SBSTA/2001/8, paras. 12 and 45).

60. The SBSTA requested the secretariat to organize a workshop to develop a work programme on Article 6 activities and to prepare a report on the results for consideration at the sixteenth session of the SBSTA. It invited Parties to submit their views on the draft terms of reference of the workshop. Submissions from Parties are contained in document FCCC/SBSTA/2002/MISC.13. The workshop is under preparation. The SBSTA noted the role that a United Nations Climate Change Day could play in raising awareness, and requested the secretariat and the United Nations Environment Programme (UNEP) to provide more information to the SBSTA at its sixteenth session (FCCC/SBSTA/2001/8, para. 45). The secretariat will provide information on the above topics during this session.

61. A statement will be made by a representative of UNEP on information relating to a United Nations Climate Change Day [and the dissemination of IPCC reports].

62. **Action:** The SBSTA may wish to take note of information provided in document FCCC/SBSTA/2002/MISC.13 and by the secretariat. Parties are invited to come prepared to provide additional guidance to the secretariat on this agenda item.

10. Other matters

(a) Special circumstances of Croatia under Article 4, paragraph 6, of the Convention

63. **Background:** The Government of Croatia proposed a methodology for calculating its base year GHG emissions (FCCC/SBI/2001/MISC.3). The SBI, at its fifteenth session, referred this document to the SBSTA, requesting it to review the methodological aspects of the approach used by Croatia. Having noted this request, the SBSTA, at its fifteenth session, invited Parties to submit their views on this matter. Submissions from Parties are contained in document FCCC/SBSTA/2002/MISC.4. It further requested the secretariat to organize a review of the national communication of Croatia and decided to consider this matter further at its sixteenth session (FCCC/SBSTA/2001/8, para. 54 (a) and (b)). The in-depth review of the first national communication of Croatia is contained in document FCCC/IDR.1/CRO and Add.1. It contains a description of the methodology used by the Government of Croatia to estimate its base year GHG inventory and the conclusions of the review team on this matter.

64. **Action:** The SBSTA is invited to consider information contained in documents FCCC/SBI/2001/MISC.3, FCCC/SBSTA/2002/MISC.4 and FCCC/IDR.1/CRO and Add.1 and to provide advice to the SBI on the methodology used by Croatia to estimate its base year GHG emissions, as appropriate.

(b) Proposal on cleaner or less greenhouse gas-emitting energy

65. **Background:** The SBSTA, at its fifteenth session, requested the secretariat to organize a workshop on the subject of cleaner or less greenhouse gas-emitting energy under the guidance of its Chairman, if possible prior to its sixteenth session, and to prepare a report on the workshop (FCCC/SBSTA/2001/8, para. 51 (b)). The SBSTA invited Parties to provide their views on the structure and scope of the workshop (FCCC/SBSTA/2001/8, para. 51 (b) and (d)). Submissions from Parties are contained in document FCCC/SBSTA/2002/MISC.3. The workshop will take place from 7 to 8 May 2002 in Whistler, Canada. A report of the workshop will be contained in document FCCC/SBSTA/2002/INF.8.

66. **Action:** The SBSTA may wish to take note of information provided in documents FCCC/SBSTA/2002/INF.8 and FCCC/SBSTA/2002/MISC.3. Parties are invited to come prepared to provide additional guidance relating to future work on this matter, as appropriate.

(c) Matters referred to the Subsidiary Body for Scientific and Technological Advice by the Subsidiary Body for Implementation

67. Any matters which are referred to the SBSTA by the SBI at their sixteenth sessions for further consideration will be taken up under this item.

11. Report on the session

68. The SBSTA may wish to adopt conclusions and authorize the Rapporteur to complete the report after the session under the guidance of the Chairman and with the assistance of the secretariat. Subject to the availability of sufficient time for their translation, conclusions will be made available in the six official languages of the United Nations.

Annex I

DOCUMENTS BEFORE THE SUBSIDIARY BODY FOR SCIENTIFIC AND TECHNOLOGICAL ADVICE AT ITS SIXTEENTH SESSION

Documents prepared for the session

FCCC/SBSTA/2001/8	Report of the Subsidiary Body for Scientific and Technological Advice on its fifteenth session, Marrakesh, 29 October to 6 November 2001
FCCC/SBSTA/2002/1	Provisional agenda and annotations. Note by the Executive Secretary
FCCC/SBSTA/2002/2	Methodological issues. Guidelines on reporting and review of greenhouse gas inventories from Parties included in Annex I to the Convention (implementing decisions 3/CP.5 and 6/CP.5). Report of an expert meeting to assess experiences in the use of the UNFCCC reporting and review guidelines
FCCC/SBSTA/2002/2/Add.1	Methodological issues. Guidelines on reporting and review of greenhouse gas inventories from Parties included in Annex I to the Convention (implementing decisions 3/CP.5 and 6/CP.5). Report of an expert meeting to assess experiences in the use of the UNFCCC reporting and review guidelines. Addendum. Proposal for revision of the UNFCCC guidelines for the technical review of greenhouse gas inventories from Parties included in Annex I to the Convention
FCCC/SBSTA/2002/2/Add.2	Methodological issues. Guidelines on reporting and review of greenhouse gas inventories from Parties included in Annex I to the Convention (implementing decisions 3/CP.5 and 6/CP.5). Report of an expert meeting to assess experiences in the use of the UNFCCC reporting and review guidelines. Addendum. Proposal for revision of the guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual inventories
FCCC/SBSTA/2002/2/Add.3	Methodological issues. Guidelines on reporting and review of greenhouse gas inventories from Parties included in Annex I to the Convention (implementing decisions 3/CP.5 and 6/CP.5). Report of an expert meeting to assess experiences in the use of the UNFCCC reporting and review guidelines. Addendum . Proposal for revision of the guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual inventories. Annex: tables of the common reporting format

FCCC/SBSTA/2002/3	Cooperation with relevant international organizations. Cooperation with other conventions: progress report on the work of the Joint Liaison Group
FCCC/SBSTA/2002/4	Methodological issues. Land use, land-use change and forestry. Definitions and modalities for including afforestation and reforestation activities under Article 12 of the Kyoto Protocol. Report on the workshop. Draft terms of reference and agenda for work. Note by the Chairman
FCCC/SBSTA/2002/5	Methodological issues. Guidelines on reporting and review of greenhouse gas inventories from Parties included in Annex I to the Convention (implementing decisions 3/CP.5 and 6/CP.5). Report on the experiences with the technical review process (implementation of decision 6/CP.5).
FCCC/SBSTA/2002/INF.1	Relationship between efforts to protect the stratospheric ozone layer and efforts to safeguard the global climate system: issues relating to hydrofluorocarbons and perfluorocarbons
FCCC/SBSTA/2002/INF.2	Methodological issues. Guidelines under Articles 5, 7 and 8 of the Kyoto Protocol. Report on the intersessional consultations on registries
FCCC/SBSTA/2002/INF.3	Methodological issues Guidelines under Articles 5, 7 and 8 of the Kyoto Protocol. Pending parts of the guidelines under Articles 7 and 8
FCCC/SBSTA/2002/INF.4	Third Assessment Report of the IPCC. Report of the workshop
FCCC/SBSTA/2002/INF.5	Methodological issues. Guidelines under Articles 5, 7 and 8 of the Kyoto Protocol. Report on the workshop on adjustments under article 5, paragraph 2, of the Kyoto Protocol
FCCC/SBSTA/2002/INF.6	Development and transfer of technologies. Technology information system
FCCC/SBSTA/2002/INF.7	Development and transfer of technologies. Guidelines for technology needs assessment
FCCC/SBSTA/2002/INF.8	Other matters. Proposal on cleaner or less greenhouse gas-emitting energy. Report on the workshop
FCCC/SBSTA/2002/INF.9	Methodological issues. Activities implemented jointly under the pilot phase: uniform reporting format. Report on the workshop
FCCC/SBSTA/2002/MISC.1	Methodological issues. Land use, land-use change and forestry: Definitions and modalities for including afforestation and reforestation activities under Article 12 of the Kyoto Protocol. Submissions from Parties on the organization of a workshop, terms of reference and an

	agenda for work relating to afforestation and reforestation activities under the clean development mechanism
FCCC/SBSTA/2002/MISC.2	Methodological issues. Activities implemented jointly under the pilot phase: uniform reporting format. Submissions from Parties
FCCC/SBSTA/2002/MISC.3	Other matters. Proposal on cleaner or less greenhouse gas-emitting energy. Submissions from Parties
FCCC/SBSTA/2002/MISC.4	Other matters. Special circumstances of Croatia under Article 4.6 of the Convention. Submissions from Parties
FCCC/SBSTA/2002/MISC.5	Third Assessment Report of the IPCC. Submissions from Parties
FCCC/SBSTA/2002/MISC.6	Relationship between efforts to protect the stratospheric ozone layer and efforts to safeguard the global climate system: issues relating to hydrofluorocarbons and perfluorocarbons. Submissions from Parties
FCCC/SBSTA/2002/MISC.7	"Good practices" in policies and measures. Submissions from Parties
FCCC/SBSTA/2002/MISC.8	Methodological Issues. Guidelines under Articles 5, 7 and 8 of the Kyoto Protocol. Views from Parties on the expedited procedure for the review for reinstatement of eligibility of a Party included in Annex I to the Convention to use the mechanisms established under Articles 6, 12 and 17 of the Kyoto Protocol
FCCC/SBSTA/2002/MISC.9	Cooperation with relevant international organizations. Cooperation with relevant inter-governmental bodies. Submissions from Parties
FCCC/SBSTA/2002/MISC.10	Cooperation with relevant international organizations. Cooperation with scientific organizations. Interim report of the Global Climate Observing System
FCCC/SBSTA/2002/MISC.12	Development and transfer of technologies. Technology information system. Submissions from Parties
FCCC/SBSTA/2002/MISC.13	Article 6 of the Convention: education, training and public awareness. Submissions from Parties
FCCC/TP/2002/2	Methodological issues. Guidelines under Articles 5, 7 and 8 of the Kyoto Protocol. Treatment of confidential information by other international treaty bodies and organizations
FCCC/IDR.1/CRO and Add.1	In-depth review of the first national communication of Croatia

Other documents for the session

FCCC/CP/2001/13 and Add.1-4	Report of the Conference of the Parties on its seventh session, held in Marrakesh from 29 October to 10 November 2001
FCCC/SBI/2001/12	National communications from Parties included in Annex I to the Convention. Ongoing activities on reporting and review of greenhouse gas inventories in Parties included in Annex I to the Convention (implementing decisions 3/CP.5 AND 6/CP.5). Progress report on the implementation of decision 6/CP.5.
FCCC/TP/2002/1	Biome-specific forest definitions
UNEP/CBD/COP/6/17/Add 2	Summary report on the work of the first meeting of the ad hoc technical expert group on biological diversity and climate change, Helsinki, 21 to 25 February, 2002

Annex II

PROPOSED SCHEDULE OF WORK FOR THE SIXTEENTH SESSION OF THE SUBSIDIARY BODIES

	Monday 3 June	Tuesday 4 June	Wednesday 5 June	Thursday 6 June	Friday 7 June	Saturday 8 June
10 a.m. to 1 p.m.			SBSTA items 1, 2, 3, 4 (a), (b), (c)	SBSTA items 8, 9, 6,10 INFORMALS	INFORMALS	INFORMALS
3 p.m. to 6 p.m.			SBSTA items 4 (d), (e), 5, 7 INFORMALS	SBSTA items (continued) INFORMALS	INFORMALS	
	Monday 10 June	Tuesday 11 June	Wednesday 12 June	Thursday 13 June	Friday 14 June	
10 a.m. to 1 p.m.	SBI items 1, 2, 3, 4, 5 INFORMALS	INFORMALS	INFORMALS	SBSTA items 3 to 11 INFORMALS	SBI items 3 to 14	
3 p.m. to 6 p.m.	SBI items 6,7, 8, 9, 10, 11, 12, 13 INFORMALS	INFORMALS	INFORMALS	SBSTA items (continued) INFORMALS	SBI items (continued)	

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Sixteenth session
Bonn, 5–14 June 2002
Item 2 (a) of the provisional agenda

PROVISIONAL AGENDA AND ANNOTATIONS

Note by the Executive Secretary

Addendum

SUPPLEMENTARY PROVISIONAL AGENDA

I. INTRODUCTION

1. A request has been received from Saudi Arabia to include an item in the provisional agenda of the Subsidiary Body for Scientific and Technological Advice (SBSTA) at its sixteenth session on the implementation of Article 2, paragraph 3, of the Kyoto Protocol.

2. In accordance with rule 12 of the draft rules of procedure being applied and with the agreement of the Chairman of the SBSTA, this item is being included as item 10 (c) of the supplementary provisional agenda below.

II. SUPPLEMENTARY PROVISIONAL AGENDA

3. The supplementary provisional agenda for the sixteenth session of the SBSTA, proposed after consultation with the Chairman, is as follows:

1. Opening of the session.
2. Organizational matters:
   (a) Adoption of the agenda;
   (b) Organization of the work of the session.
3. Third Assessment Report of the Intergovernmental Panel on Climate Change.

4. Methodological issues:

   (a) Guidelines on reporting and review of greenhouse gas inventories from Parties included in Annex I to the Convention (implementing decisions 3/CP.5 and 6/CP.5);

   (b) Guidelines under Articles 5, 7 and 8 of the Kyoto Protocol;

   (c) Activities implemented jointly under the pilot phase: uniform reporting format;

   (d) Development of good practice guidance and other information for land use, land-use change and forestry;

   (e) Land use, land-use change and forestry: definitions and modalities for including afforestation and reforestation activities under Article 12 of the Kyoto Protocol.

5. Development and transfer of technologies.

6. Relationship between efforts to protect the stratospheric ozone layer and efforts to safeguard the global climate system: issues relating to hydrofluorocarbons and perfluorocarbons.

7. "Good practices" in policies and measures.

8. Cooperation with relevant international organizations.

9. Article 6 of the Convention: education, training and public awareness.

10. Other matters:

   (a) Special circumstances of Croatia under Article 4, paragraph 6, of the Convention;

   (b) Proposal on cleaner or less greenhouse gas-emitting energy;

   (c) Implementation of Article 2, paragraph 3, of the Kyoto Protocol;

   (d) Matters referred to the Subsidiary Body for Scientific and Technological Advice by the Subsidiary Body for Implementation.

11. Report on the session.

III. ANNOTATIONS TO THE SUPPLEMENTARY PROVISIONAL AGENDA

10. Other matters

(c) Implementation of Article 2, paragraph 3, of the Kyoto Protocol

4. **Background:** The Government of Saudi Arabia, by its letter dated 1 May 2002 addressed to the Coordinator, Intergovernmental and Conference Affairs, requests the secretariat to add this item to the provisional agendas of the SBI and the SBSTA. In the view of the Government of Saudi Arabia, initiating consideration of this item is justified by paragraph 1 (c) of decision 1/CP. 4 which includes "Implementation of Article 4.8 and 4.9 of the Convention (covering also Articles 2.3 and 3.14 of the Kyoto Protocol) (decision 5/CP.4)" as part of the Buenos Aires Plan of Action. The Government of Saudi Arabia is also of the view that, although decision 5/CP.7 entitled "Implementation of Article 4, paragraphs 8 and 9, of the Convention (decision 3/CP.3 and Article 2, paragraph 3, and Article 3, paragraph 14, of the Kyoto Protocol)" mentions Article 2, paragraph 3, of the Kyoto Protocol in its title, this article has not been elaborated in the substance. The Government of Saudi Arabia, therefore, requests that this item be included in the SBSTA agenda.

5. **Action:** The SBSTA may wish to consider this item and take any action it deems necessary.

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Item 4 (a) of the provisional agenda

METHODOLOGICAL ISSUES

GUIDELINES ON REPORTING AND REVIEW OF GREENHOUSE GAS INVENTORIES FROM PARTIES INCLUDED IN ANNEX I TO THE CONVENTION (IMPLEMENTING DECISIONS 3/CP.5 AND 6/CP.5)

Report of an expert meeting to assess experiences in the use of the UNFCCC reporting and review guidelines

Note by the secretariat

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I. INTRODUCTION

A. Mandate

1. At its fifteenth session, the Subsidiary Body for Scientific and Technological Advice (SBSTA) welcomed the organization of an expert meeting by the secretariat, to be held from 4 to 6 December 2001 in Bonn, on methodological and operational issues relating to the use of:

(a) The guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual inventories (hereinafter referred to as the "reporting guidelines"); and

(b) The UNFCCC guidelines for the technical review of greenhouse gas (GHG) inventories from Parties included in Annex I to the Convention (hereinafter referred to as the "review guidelines").

2. The SBSTA requested the secretariat to prepare a report of the expert meeting for consideration at its sixteenth session (see document FCCC/SBSTA/2001/8, paragraph 15 (b)).

3. The purpose of the expert meeting was to advance the methodological work relating to the revision of the UNFCCC reporting and review guidelines. The participants at the expert meeting were to assess the experiences of Parties, review experts and the secretariat in the use of these guidelines during the trial period.[1] In accordance with decisions 3/CP.5, 6/CP.5 and 34/CP.7 (FCCC/CP/1999/7 and FCCC/CP/2001/13/Add.4) the Conference of the Parties (COP) will consider the revision of the UNFCCC reporting and review guidelines at its eighth session.

B. Scope of this note

4. This report is prepared in response to the mandate mentioned in paragraph 2 above. This report also includes three addenda:

(a) FCCC/SBSTA/2002/2/Add.1: Proposal for revision of the UNFCCC guidelines for the technical review of greenhouse gas inventories from Parties included in Annex I to the Convention;

(b) FCCC/SBSTA/2002/2/Add.2: Proposal for revision of the UNFCCC guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: Reporting guidelines on annual inventories;

(c) FCCC/SBSTA/2002/3/Add.3: Proposal for revision of the UNFCCC guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: Reporting guidelines on annual inventories. Annex: Tables of the common reporting format.

5. These addenda contain draft revised review and reporting guidelines, including draft revised tables of the common reporting format (CRF) prepared to facilitate the consideration of the revision of these guidelines by the subsidiary bodies at their sixteenth session. These draft revised guidelines, which include CRF tables, were prepared by the secretariat under the guidance of the Chairman of the SBSTA, following the approach for the continuation of work after the expert meeting endorsed by the participants thereof, as described in paragraph 17 below.

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[1] Decisions 3/CP.5 and 6/CP.5 established a trial period for the use of the UNFCCC reporting and review guidelines covering the GHG inventories submitted in 2000 and 2001.

C. Possible action by the SBSTA

6. The SBSTA may wish to consider the information contained in this note when considering possible revisions of the reporting and review guidelines at its sixteenth session, with a view to recommending the adoption of revised reporting and review guidelines by the COP at its eighth session. The SBSTA may also wish to use this information to provide additional guidance to the secretariat in the work needed in order to implement decisions 3/CP.5, 6/CP.5 and 34/CP.7.

II. PROCEEDINGS

A. General issues

7. The expert meeting for assessing experiences in the use of the UNFCCC reporting and review guidelines was held in Bonn from 4 to 6 December 2001. The agenda of the expert meeting can be found at http://unfccc.int/sessions/workshop/010412/index.html.[2]

8. In total, 60 experts from 25 Parties included in Annex I to the Convention (Annex I Parties), including seven Annex I Parties with economies in transition, and 16 Parties not included in Annex I to the Convention (non-Annex I Parties),[3] who had participated in the review activities organized during the trial period for the technical review guidelines, attended the expert meeting. In addition, one representative of the Intergovernmental Panel on Climate Change (IPCC) and two experts from international organizations, the International Energy Agency (IEA) and Organizacion Latinoamericana de Energia[4] (OLADE), attended the expert meeting. The list of participants can be found on the secretariat web site.

9. The expert meeting was chaired by Mr. Halldor Thorgeirsson Chairman of the SBSTA, who officially opened the meeting. He was unable to be present for the entire expert meeting due to other obligations and he asked Ms. Helen Plume (New Zealand), who kindly accepted, to chair the expert meeting during his absence.

10. The secretariat made five presentations outlining the key technical and methodological issues addressed in the working paper prepared for the expert meeting. These presentations were followed by a round-table discussion, during which five national experts from Annex I Parties whose GHG inventories had been reviewed during the trial period presented their national perspectives and experiences relating to in-country, desk and centralized reviews. The presentations of Mr. Michael Gillenwater (United States of America), Mr. Jos Olivier (the Netherlands), Ms. Helen Plume (New Zealand), Ms. Penny Reyenga (Australia) and Mr. Klaus Radunsky (Austria) can be found on the secretariat web site.

B. Documentation

11. Background information on the experiences of Parties and the secretariat during the trial period is contained in the documents prepared for the fifteenth session of the subsidiary bodies, namely FCCC/SBSTA/2001/5 and Add.1, FCCC/SBI/2001/12, FCCC/SBSTA/2001/MISC.4 and FCCC/SBSTA/2001/MISC.5. In addition, the secretariat prepared five working papers based on

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[2] All documents referenced in this note that have been posted on the secretariat web site can be found at this location.

[3] Seven invited experts from six non-Annex I Parties were not able to participate in the expert meeting.

[4] Latin American Energy Organization.

information contained in the documents mentioned above and the IPCC good practice guidance[5] to facilitate discussions during the expert meeting. These working papers can be found on the secretariat web site.

C. Organization of the expert meeting

12. The deliberations at the expert meeting were conducted through three working groups. Two groups dealt with methodological and technical issues relating to the reporting guidelines and the review guidelines. A smaller group dealt with technical matters relating to the development of software tools for assisting Parties to report, and experts to review, GHG inventory data.

13. The working group on the reporting guidelines conducted its work under the co-chairmanship of Mr. Newton Paciornik (Brazil) and Ms. Dina Kruger (United States of America). The discussions focused on proposals for modifying the existing UNFCCC reporting guidelines on the basis of the experience gained during the trial period and the conclusions of the SBSTA on the IPCC good practice guidance (FCCC/SBSTA/2000/5, paragraph 44). The conclusions of this group are presented in section III of this report.

14. In order to address the possible modification of the sectoral tables of the CRF, three sectoral groups were formed (energy; industrial processes, solvent and other product use and waste; and agriculture)[6] in which a limited number of experts with recognized experience in these sectors participated. The outcomes of the discussions of these groups are of a very technical and detailed character. Due to time limitations, these outcomes were not considered in detail by the working group on reporting guidelines and thus have not been included in this report. The Chairman invited participants at the expert meeting, as individuals or endorsed by their respective Parties, to provide their views on the outcomes of the deliberations of the sectoral groups. Both these outcomes and the views received can be found on the secretariat web site.

15. The working group on the review guidelines conducted its work under the co-chairmanship of Mr. William Kojo Agyemang-Bonsu (Ghana) and Mr. Jim Penman (United Kingdom of Great Britain and Northern Ireland). The discussions focused on proposals for modifying the existing UNFCCC review guidelines based on the experience gained during the trial period. The conclusions of this group are presented in section IV of this report.

16. The discussions of the group on software-related issues were facilitated by Mr. Tinus Pulles (the Netherlands). The group focused on technical matters relating to the development and improvement of the existing software tools, as well as on the need for new tools for the reporting and review of GHG inventory data. The conclusions of this group are presented in section V of this report.

D. Continuation of the work after the expert meeting

17. The Chairman of the SBSTA proposed the following approach, which was accepted by the participants at the expert meeting, for continuing the work on the reporting and review guidelines in preparation for the sixteenth session of the SBSTA:

(a) Request the secretariat to prepare revised draft reporting and review guidelines in order to facilitate the discussion of these matters during the sixteenth session of the SBSTA. These draft guidelines

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[5] In this document, the IPCC *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories* is referred to as the "IPCC good practice guidance".

[6] Sectoral tables of land-use change and forestry were not considered by the experts, as explained in paragraph 40 of this report.

should be prepared under the guidance of the Chairman of the SBSTA assisted by the co-chairs of the working groups of the expert meeting, and by a limited number of experts with substantial inventory review experience who had acted as lead reviewers during the trial period and attended the expert meeting;

(b) The proposed draft revised guidelines should be based on the reporting and review guidelines adopted by the COP at its fifth session, the conclusions of the SBSTA on the IPCC good practice guidance agreed upon at its twelfth session, the experience gained during the trial period as described in the documents mentioned in paragraph 11 above, and the outcome of the expert meeting;

(c) The secretariat should publish these revised draft guidelines on the UNFCCC web site no later than 1 April 2002. Parties may wish to provide their views on these draft revised guidelines one month later for compilation by the secretariat into a miscellaneous document for the consideration of the SBSTA at its sixteenth session.

18. The Chairman stressed the importance of the subsidiary bodies completing their consideration of the revised reporting and review guidelines at their sixteenth session. This would facilitate the adoption of these guidelines by the COP at its eighth session and would allow reviews of all GHG inventories from Annex I Parties to be initiated in 2003, as mandated by decision 3/CP.5, using the revised reporting and review guidelines.

III. CONCLUSIONS ON GUIDELINES FOR REPORTING ANNUAL GREENHOUSE GAS INVENTORIES

A. General issues

1. Amount of information to be reported annually

19. The participants recommended that the unchanged data from previous submissions should not be resubmitted by Parties. The new software being developed by the secretariat must be designed to handle changes from previous submissions, clearly identify such changes, and to ensure that all data (both new and unchanged) must be available for review to ensure time-series consistency.

2. Recalculations

20. The participants agreed to expand the reporting requirements to make it possible to distinguish between recalculations due to methodological changes (changes in methods, emission factors and activity data gathering) and minor revisions/corrections to the data. To facilitate such reporting in CRF table 8(b): Recalculation – explanatory information, Parties should choose from a more complete list of possible reasons for changes, including *inter alia*: recalculations due to changes in methodology (including the way in which activity data are collected and emission factors are derived); error correction; reallocation among source categories; and major or minor statistical or editorial changes.

21. In addition, CRF table 8(b) should be further modified to present quantitative information on the magnitude of the changes, so that the significance of changes resulting from recalculations can be readily assessed. Two types of quantitative information were recommended: the absolute change of emissions for the individual gases, expressed in Gg of CO_2 equivalent, and the impact of the recalculation on the national total in percentage terms.

22. The participants recommended that the software continue to automatically calculate the table of changes to past data (CRF table 8(a): Recalculation – recalculated data). The software should be further developed to calculate the magnitude of changes indicated in paragraph 21 above.

3. Precursor gases

23. The participants recommended no changes to the current guidelines on this matter.

4. Redundancy in the CRF

24. The participants identified and discussed some redundancy in the current CRF, in particular CRF table Summary 1.B: short summary report for national GHG inventories and table 11: Checklist of reported inventory information. Deletion of table 11 from the CRF was recommended. The participants felt that CRF table Summary 1.B provided useful information to reviewers. It does not necessarily need to be provided as an input from Parties because it can be (and currently is) calculated from links to other tables in the CRF.

25. The participants requested the secretariat to revise CRF table 9: Completeness, to reduce redundant information. In addition, the sectoral groups were requested to elaborate suggestions for eliminating redundant information in the sectoral tables and sectoral background data tables of the CRF.

26. The participants took note of the information provided by the secretariat about new software that will be developed. They recommended that the secretariat consider approaches for reducing redundancy in reporting in the context of the development of this software.

B. National inventory report

27. The participants noted that the national inventory report (NIR) is the most important part of annual inventory reporting and that without an NIR it is not possible to have either transparency or a complete inventory review. The participants also noted that the NIR should contain the main explanatory information relating to the preparation of the inventory.

28. The participants noted that the NIRs currently provided by Parties lack a common structure. To help Parties report, and in order to support the review process, the participants recommended that a common and more comprehensive structure should be included in the guidelines. The structures of several NIRs reported by Parties were reviewed and a proposal for a common structure was developed and recommended by the participants. This structure is included in the annex to this report.

29. In preparing draft revised guidelines, the importance of the NIR should be enhanced by placing the NIR section before the CRF section. In addition, linkages between the NIR and the CRF should be improved to enable reviewers to assess both the detailed descriptions in the NIR and the more quantitative information in the CRF.

30. In preparing draft revised guidelines, a revision of paragraph 33 (c) - (i) of the current reporting guidelines (FCCC/CP/1999/7), describing the present content of the NIR, is necessary. The content of the proposed structure for the NIR, as described in the annex to this note, should be considered when revising paragraph 33 (c) – (i) in order to avoid repetition.

31. Paragraph 33 (b) of the current reporting guidelines, referring to calculation sheets, is unclear in its scope. The participants suggested that comprehensive information on methodologies used should be provided in the NIR and, therefore, paragraph 33 (b) should be deleted. However, the participants also noted that detailed information for reviews is important. They recommended that calculation sheets could be reconsidered in the future as Parties gain additional experience both with preparation of NIRs and the inventory review, if it is subsequently determined that Parties are not providing enough information for an effective review.

C. Matters relating to the CRF

32. The participants noted that the CRF was mainly designed to report quantitative inventory data and to facilitate comparisons of inventory data and trends among Parties. In addition, the participants discussed specific issues relating to the CRF tables.

1. Additional information and documentation boxes

33. The "documentation" boxes in the CRF should be retained, but their use should be minimized to the extent possible. The participants noted that detailed explanations should be provided in the NIR rather than in the CRF. They suggested that "documentation" boxes provide references to detailed explanations contained in the NIR.

34. Some information currently required in the "additional information" boxes could be better included in the NIR. Information provided in the "additional information" boxes that is useful for the review should, however, be maintained in the CRF. The extent to which the elements of additional information boxes should be retained in the CRF was discussed in the sectoral groups mentioned in paragraph 14 above.

2. Notation keys

35. The participants agreed that the notation key "0",[7] which Parties have used when reporting emissions by sources or removals by sinks of greenhouse gases, should no longer be used as a notation key. Parties should either provide a number (even if very small) or report "NE",[8] and that entries of "NE" should be explained in the completeness table of the CRF.

3. Reporting on methods and emission factors

36. Reporting on methods and emission factors used by Parties was discussed, together with possible modifications to the UNFCCC reporting guidelines, in order to reflect the IPCC good practice guidance.

37. The participants suggested modifying CRF table Summary 3 (Summary report for methods and emission factors used) in order to include information on what constitutes a key source and to identify whether the methods used to estimate GHG emissions correspond to those recommended in the decision trees of the IPCC good practice guidance.

4. Analysis of possible changes to sectoral tables

38. Due to the technical and detailed character of this analysis, this task was assigned to the sectoral group of experts with experience in the different IPCC sectors, as described in paragraph 14 above. The participants at the expert meeting recommended modifying the sectoral tables of the CRF, including making some changes to the shaded cells in the tables. The sectoral groups elaborated their proposed changes to the shaded cells, based on suggestions by Parties and the secretariat. The revised tables are included in the addendum 3 of this note (FCCC/SBSTA/2002/2/Add.3).

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[7] The notation key "0" was used to report estimates of emissions and removals which were considered to be less than one half of the unit being used to record the inventory table.

[8] The notation key "NE" was used to report existing emissions by sources and removals by sinks of greenhouse gases which have not been estimated or when no estimate is reported because the source is considered very small.

D. Possible modifications to the UNFCCC reporting guidelines to reflect the IPCC good practice guidance

39. The secretariat prepared, for the expert meeting, working paper No. 6, "Possible modifications to the UNFCCC reporting guidelines to reflect the IPCC good practice guidance". The working paper contained suggestions on how to revise the reporting guidelines to incorporate the IPCC good practice guidance.[9] The participants considered all the technical issues identified in the working paper. They recommended several specific changes to the reporting guidelines. These recommendations are represented in table 1.

Table 1: Recommendations on possible modifications to the UNFCCC reporting guidelines to reflect the IPCC good practice guidance[10]

General recommendations Participants recommended replacing general references to "good practice" in the current reporting guidelines with more specific references to the IPCC good practice guidance already considered and endorsed by the SBSTA.
Recommendations paragraph by paragraph *(Paragraph numbers refer to the current UNFCCC reporting guidelines (FCCC/CP/1999/7).)* Paragraph 3: "Principles and definitions" The reference to "good practices" and the footnote should be deleted because they are out of date, as the IPCC good practice guidance has now been adopted. Paragraph 4: "Principles and definitions" A general reference to good practice guidance and its definitions could be included if necessary. Paragraph 7: "Methods/Methodology" A general reference to the application of good practice guidance should be included in the introductory text, but with a clear distinction between the IPCC Guidelines and the IPCC good practice guidance. Also a reference to IPCC good practice guidance should be included when Parties use national methodologies. The last part of the second sentence referring to how to "produce the most accurate data depending on data availability" should be deleted and a reference to the IPCC good practice guidance should be included instead. Include a new paragraph 7bis: "Methods/Key source determination" The participants recommended that a new paragraph should be included encouraging Parties to determine their national *key sources* for the base year and the latest reported inventory year as described in the IPCC good practice guidance. It should be done using the Tier 1 or Tier 2 both as level and trend assessment. For key sources, participants recommended that the guidelines should include encouragement to Parties to make every effort to use a recommended method for estimation of GHG emissions, in accordance with the corresponding decision trees in the IPCC good practice guidance.

[9] See conclusions of the SBSTA on the IPCC good practice guidance in document FCCC/SBSTA/2000/5. See working paper No. 6 on the secretariat web site.

[10] These recommendations reflect the points on which agreement was reached during the expert meeting. In some cases, they reflect textual changes to the current reporting guidelines and, in some cases, additional instructions to Parties that will be included in the text.

Paragraph 8: "Methods/Methodology"
The IPCC good practice guidance provides revised default activity data and emission factors. A reference to these should be included. The participants recommended that the guidelines should include encouragement to Parties to use national emission factors and activity data if they are developed in a manner consistent with the good practice guidance.

Paragraph 9: "Methods/Good practices"
This sub-heading and paragraph should be deleted as this concept is already covered in paragraph 7.

Paragraph 10: "Methods/Recalculations"
A reference to IPCC good practice guidance on the need for recalculations should be included.

Paragraph 11: "Methods/Recalculations"
The participants recommended that the guidelines should include a request to Parties to use the methods for recalculation provided in the IPCC good practice guidance when demonstrating time-series consistency. The last sentence of this paragraph in the current guidelines relating to the documentation of any good practices should be deleted.

Paragraph 12: "Methods/Uncertainties"
The participants recommended that the guidelines should include encouragement to Parties to make quantitative uncertainty estimates in accordance with the IPCC good practice guidance.

Include a new paragraph: "Methods/QA-QC"
The participants recommended that a sub-section on QA/QC, with reference to the IPCC good practice guidance, should be included. They also recommended that at least Tier 1 should be used for QC procedures, but Parties are encouraged to use Tier 2.

Paragraph 18: "Reporting/General guidance/Estimates of emissions and removals"
A reference to the IPCC good practice guidance method for distinguishing between emissions arising from use of fuel for domestic and international marine and aviation transportation should be included.

Paragraph 20: "Reporting/General guidance/Recalculations"
The participants recommended that the guidelines should include a request for explanation if Parties have not recalculated an estimate, where a recalculation is called for in the IPCC good practice guidance. They also recommended that if Parties do not use methods for recalculation described in the good practice guidance, Parties should justify this and give a full explanation of the methodology used. In addition, the participants recommended that Parties should report in the NIR the effect of the recalculation on both level and trend.

Paragraph 24: "Reporting/ General guidance/Uncertainties"
A reference to good practice should be included by deleting the word "indicated" in the first sentence and inserting "estimated and reported in accordance with good practice guidance". The last sentence of this paragraph relating to reporting of quantitative information on uncertainties should be deleted.

Include a new paragraph: "Reporting"/Key source"
The participants recommended that a new paragraph should be included requesting Parties to report the percentage contribution of *key source* categories to their national totals, both on emission level and trend, expressed in terms of CO_2 equivalent.

Paragraph 35: "Record keeping"
The words "expert judgement where appropriate" should be included in the first sentence.

Recommendations referring to common reporting format (CRF) tables

In addition to the proposed modifications to the current table Summary 3, as reflected in paragraph 37 above, the participants recommended replacing current CRF tables or including new tables as follows:

Replacement of table 7 – Overview table for national greenhouse gas inventories (IPCC Table 8A)
Current CRF table 7 should be replaced in order to include columns for reporting activity data uncertainty, emission factor uncertainty and the combined uncertainty, as well as a reference for expert judgement.

Inclusion of a new table to report on key sources
Include a table for reporting *key sources* in the CRF, both on emission level and trend assessment.

E. Land-use change and forestry (LUCF)

40. The participants recommended that the CRF tables (sectoral background tables 5A-D) related to LUCF should not be revised at this time because of the IPCC's ongoing work to develop good practice guidance for the LULUCF sector.

41. While waiting for the outcome of the ongoing work of the IPCC, the participants also recommended that Parties should be encouraged to provide more information about the methods used to estimate emissions and removals of greenhouse gases in the LUCF sector, as well as background data, in their NIR in order to improve the transparency of the reporting of these emissions and removals.

IV. CONCLUSIONS ON GUIDELINES FOR THE TECHNICAL REVIEW OF ANNUAL GREENHOUSE GAS INVENTORIES[11]

A. Initial check and status reports

42. The participants recommended that the approach for preparing status reports should not change. They also agreed that the publication of the status report should be completed within a total of seven weeks (from the date of receipt of the submission by the secretariat), including three weeks for comments from Parties on the status reports. This does not affect the timeline for the preparation of the synthesis and assessment report, since this process runs in parallel with the preparation of the status reports.

B. Synthesis and assessment

43. The participants emphasized the importance of synthesis and assessment (S&A) for the whole review process and agreed that the current practices should remain in place. They recommended that six experts should be involved for one week during phase II of the synthesis and assessment stage.

1. Timing of the different stages of the synthesis and assessment

44. The participants agreed on a timeline for the publication of the S&A report (16 weeks from 15 April, including three weeks for Parties to provide their comments). They also agreed that in order to achieve publication of the S&A report within 16 weeks, a cut-off date of six weeks (after 15 April) for submission of the CRF or of revised GHG inventory data should be established. This implies that

[11] In accordance with decision 6/CP.5, the technical review process of GHG inventories consists of three stages: initial check, synthesis and assessment and individual reviews. This section of the report provides conclusions and recommendations for each of these three stages.

submissions received after the cut-off date[12] would not be considered for the preparation of the S&A report, but the submissions provided before September could still be reviewed during the third stage of the review process.

45. The participants recommended that the secretariat should complete an assessment of the GHG inventories submitted after the cut-off date and should publish these assessments as separate documents (addenda to the S&A report), provided that this does not delay the review process for other Parties.

2. Structure and content of the synthesis and assessment report

46. The participants agreed that:

(a) The current structure of the S&A report should be maintained: section I containing a standardized set of data comparisons, and section II identifying potential issues to be clarified by the expert review teams during the individual reviews;

(b) The standardized set of data comparisons should be expanded with statistical determination of outliers and graphical representations;

(c) The S&A tables should be expanded to include any source that could be considered a key source in Annex I Parties using the common level of category disaggregation;

(d) The S&A report should only be published electronically on the web site of the secretariat.

47. The participants recommended that the secretariat should send the relevant section of the draft report to Parties for comments as soon as it is finalized.

C. Individual reviews[13]

1. Overall approach

48. In order to fulfil the provision of decision 6/CP.5 relating to the annual review of all GHG inventory submissions from Annex I Parties, the participants agreed that, starting in 2003, the secretariat should organize eight in-country reviews per year (i.e., all GHG inventories of Annex I Parties should be subject to an in-country review once every five years). The annual inventory submissions of the other Annex I Parties will be reviewed through desk and centralized reviews.[14] The secretariat should organize an equal number of desk and centralized reviews, to the extent possible. The combination of these review activities is to be decided by the secretariat.

49. The participants noted the need for adequate communication among members of the expert review teams (ERTs) and between ERTs and the Parties under review, especially during desk and centralized reviews.

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[12] Six weeks from the submission due-date implies by 27 May of each year.

[13] During the trial period, three approaches for the individual reviews were tested: desk reviews (sending information to experts), centralized reviews (experts meeting in a single location) and in-country visits.

[14] This implies that 32 GHG inventories from Annex I Parties will be reviewed on an annual basis either through a desk review or a centralized review.

50. The participants noted that centralized reviews offer opportunities for capacity building for new experts.[15] They also indicated that the issues related to the participation of new experts in the centralized reviews may be influenced by the outcome of the discussions of the SBSTA on the training of experts.[16]

2. Number of inventories to be reviewed

51. During a centralized review up to six GHG inventories should be reviewed. During a desk review up to five GHG inventories should be reviewed.

3. Expert review teams (ERTs)

52. The participants agreed that:

(a) Two lead reviewers (one from a non-Annex I Party and one from an Annex I Party) in each expert review team should be appointed, selected from among experienced inventory experts;

(b) At least one expert should be appointed as a generalist in each expert review team;

(c) The normal size of the ERTs for individual reviews should be established as:

(i) Six experts for in-country visits (one additional new expert could participate working together with experienced experts); and

(ii) Twelve experts for centralized reviews (a maximum of five new experts could participate in the teams working together with experienced experts);

(iii) Twelve experts for desk reviews (new experts will not participate in desk reviews);

(d) The size of the ERTs should be expanded if the complexity of the inventory so requires;

(e) Experts from relevant international organizations should be involved when appropriate.

4. Timing of the different stages of the individual reviews

53. The participants agreed that individual reviews should start in September each year. Each in-country review should be completed within 14 weeks and each desk or centralized review activity should be completed within 20 weeks.

5. Additional guidance for review experts

54. The participants agreed that:

(a) The current preliminary guidance for review experts (see the secretariat web site) should be expanded and specific review guidance should be developed for each IPCC sector and for cross-cutting issues in the inventory. This guidance should be based on the reporting guidelines, the IPCC good practice guidance and on the experience gained during the trial period of the technical review process of GHG inventories;

(b) This guidance should be further elaborated as an established procedure;

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[15] In this note, new expert refers to a national inventory expert who does not have experience of the technical review process of GHG inventories from Annex I Parties.

[16] The COP, in its decision 23/CP.7, requested the SBSTA at its seventeenth session to consider the issue of the training of experts participating in expert review teams.

(c) Standard procedures/documentation should be developed by the secretariat to orient and prepare the members of ERTs performing desk reviews, centralized reviews and in-country reviews;

(d) Each sectoral expert should be prepared to "chair" working sessions covering the relevant sector(s) during in-country reviews.

6. Determination of key sources

55. The participants agreed that:

(a) Parties should report the *key sources* in accordance with the IPCC good practice guidance;

(b) The secretariat should continue to determine *key sources* on the basis of level and trend determination for all Parties using a common level of category disaggregation;

(c) The comparison of both *key source* determinations is important for the review of GHG inventories.

56. The participants noted the need for flexibility in determining *key sources*. The participants recommended that ERTs should identify the reason for any differences between the Party and the secretariat in determining *key sources* and that ERTs should identify missing sources.

7. Structure and content of the individual review reports

57. The participants agreed that:

(a) For in-country reviews the report should not exceed 25-30 pages in accordance with the outline of the preliminary guidance for review experts mentioned in paragraph 54 (a) above, with a 2-3 page summary;

(b) For desk and centralized reviews, the report should be shorter (up to 10 pages), focusing on particular strengths and problems and on an overall appraisal of the quality/reliability of the inventory, emission trends, actual emission factors and activity data and the degree of adherence to the reporting guidelines and IPCC good practice guidance;

(c) A new structure should be developed for each type of review report, including standardized tables whenever possible, to increase the efficiency of communication;

(d) Reports should be published solely on an electronic basis on the UNFCCC web site.

8. Communications between expert review teams and national experts during desk and centralized reviews

58. The participants agreed that communications should be through the lead reviewers and a contact person designated by the Party under review. Detailed enquiries can be pursued at an expert level, if a Party so agrees. The secretariat should notify Parties about up-coming desk and centralized reviews and ask the Parties to identify contact persons through which the enquiries could be directed.

9. Participation of review experts in the review process and identification of qualified review experts

59. The participants agreed that:

(a) National focal points should update the information about experts nominated to the UNFCCC roster of experts and should ensure that a minimum of two experts are nominated for the review of GHG inventories. In addition, they should nominate at least two additional experts for this purpose, if possible, and provide information on the practical experience of the candidates, especially in the preparation of national GHG inventories, and the review process;

(b) The secretariat should select one new expert for each in-country review and a maximum of five new experts for each centralized review;

(c) There is an annual need for at least 100 potentially available experts from Parties included in Annex II to the Convention (Annex II Parties) to be chosen from the UNFCCC roster of experts;

(d) The secretariat should communicate the needs for the review process (timing, number of experts from each Annex II Party) to the focal points of Annex II Parties on an annual basis at least three months in advance of the planned review activities, and should ask the national focal points to indicate the availability of their review experts for these activities.

10. Review of models

60. The participants noted that reviewing sophisticated models and country-specific methodologies for estimating emissions and removals of GHG is part of the technical review process, but such reviews can be a complex task for the ERTs. The ERTs should be encouraged to provide advice on how to examine the models/methods, for example, through:

(a) Peer review of the model via the scientific literature;

(b) Input/output analysis, for example, through consideration of implied emission factors or inversion;

(c) Model comparison and review activities (e.g., workshops) organized domestically or internationally by the Party or Parties themselves.

D. Other issues

1. Recommendations on reporting and software issues

Issues related to reporting

61. The participants recommended that:

(a) The percentage of *key source* emissions identified by Parties should be included in the NIR;

(b) The methods used to determine *key sources* should be reported in the NIR.

Software issues related to the review guidelines

62. The participants agreed that a data search software tool should be distributed on CD(s) to the experts prior to a review activity and should also be available for downloading from the UNFCCC web

site, bearing in mind the need for version control. Such a tool should include the full GHG inventory database which supports its use.

63. The participants agreed that access to the software tools developed for the review process should, at least in the initial stages, be limited to the members of the ERTs and Parties.

64. The participants noted that:

(a) Data presented in graphical format constitute a useful tool for the review process;

(b) Methods and tiers used for specific sectors as well as cross-references from the CRF tables to the NIR for all Parties should be made available to the review experts;

(c) For comparison purposes, it would be useful to have a tool for obtaining the time-series and trends for implied emission factors, emissions, activity data and indices, e.g., emissions per GDP, human population figures as per capita, population of livestock, etc.;

(d) It would be useful to assess which queries and tasks mentioned in the preliminary guidance for review experts could be facilitated through the use of the software tools;

(e) The CRF software should provide cross-references to the location of the methodological description in the NIR.

2. Recommendations for the revision of the review guidelines

65. The participants felt that some elements in the draft guidelines for review under Article 8 of the Kyoto Protocol could be relevant to the further development of the review guidelines under the Convention. They suggested that these elements could be drawn upon, as appropriate, bearing in mind the differences between the review processes under the Kyoto Protocol and the Convention.

V. CONCLUSIONS ON SOFTWARE-RELATED ISSUES

Key issues addressed at the expert meeting

1. GHG reporting and review-related tasks, information and data flow

66. The group considered the various tasks of the Parties and the secretariat throughout the reporting and review phases. It discussed requirements, tasks, related information, products, dependencies and data flows. It also assessed the existing software support for these tasks and the need for new/revised software related support. The discussions delineated the various tasks and sub-tasks of the reporting and review phases and, thus, the possible functions of software-related support for both phases.

2. Reporting software needs

67. With regard to the reporting software, which was seen as a priority by the group, it was felt that it was essential to revise it and move from a spreadsheet to a database platform software. The group conducted detailed discussions on the priorities for developing and sequencing the inputs needed to develop such software. The major objectives of the software should be:

(a) To incorporate the changes to the guidelines;

(b) To ease and simplify reporting (data entry, bulk import);

(c) To facilitate the processing time and reduce inconsistencies/errors.

68. With these objectives in mind it was agreed that the possible functions of the software would need to be prioritized by the secretariat to ensure the major objectives could be met.

3. Review software needs

69. The group had a limited discussion on the existing tools for the review process and the need for additional support during the various review stages. The group identified the following basic priorities and needs for the review process:

(a) The automated production of standard reports for Parties and ERTs:

(i) Synthesis and assessment (section I: tables);

(ii) Status reports (initial checks) ;

(b) A data search tool for reviews, and consideration of its provision for external review activities (desk reviews, in-country visits);

(c) The production of recalculation comparisons and *key source* analysis for support to the ERTs.

70. In addition, the group identified the following future needs:

(a) Development of more sophisticated data search and presentation software (graphical, customized tables);

(b) Inclusions of external statistics in the data management system and provision of related analysis with such statistics.

4. Timeline for development of software

71. Following the discussions on the reporting and review software, and with input from the working groups on reporting and review, the group discussed the overall priorities and possible time frames for implementation. It was felt that the immediate priority would need to be the development of revised reporting software and continued support of the existing data search and analysis tools for the ERTs. In this regard, participants considered it vital that the software be available when the Parties begin to report according to the revised reporting guidelines. The group suggested that advanced functions in any new reporting software and additional software tools for the review process should be considered as a second priority.

72. Finally, a number of participants voiced their interests in providing assistance to the secretariat in testing and providing feedback on the software tools to be developed.

Annex

National Inventory Report (proposed table of contents as discussed in the expert meeting)

Executive summary

For example, aggregate results using global warming potentials (GWPs)

- For example: 1990-1999 using GWPs
- Synthesis analysis by sources
- Synthesis analysis by gas

Chapter 1 Introduction

Institutional arrangements and framework for inventory preparation

Chapter 2 Inventory preparation process

- Brief description of the process: data collection and process - data storage, etc. (or include in Chapter 1)
- QA/QC process, including verification and treatment of confidentiality issues where relevant
- Actions undertaken in response to the issues raised by the UNFCCC review
- Future improvement of the inventory process (e.g., methodological changes, etc.)

Chapter 3 Trends in total greenhouse gas emissions

- Aggregate results using GWP
- Synthesis analysis by sources
- Synthesis analysis by gas

Chapter 4 General issues

4.1 General methodological overview

Short section with emphasis on

- Methodologies used (e.g., IPCC, CORINAIR, etc.)
- Tier approaches generally used
- Include Summary Table 3
- Any major deviation from standard methodology

4.2 Recalculations (or separate chapter)

- Implications for emissions
- Implications for trends
- Justifications

4.3 Source allocations and completeness

- Feedstocks, country-specific allocations
- Completeness and sources reported elsewhere

4.4: General uncertainty assessments and key sources analysis

- General uncertainty assessments
- Key sources analysis

Chapter 5 Inventory presentation

5.1 Energy

5.1.1 Trends

- subcategories analysis following CRF tables (as cross-referenced to CRF)

5.1.2 Key Sources

5.1.2.1 Key source 1 (cross reference with CRF, for example, number of underground mines)

- Methodological issues (choice of methods/AD/EF, assumptions, parameters and conventions underlying the emission and removal estimates, as well as the rationale for their selection, any specific methodological issues - remind to refer to the appropriate document and reference notes)
- Uncertainties
- Source-specific verification, if applicable
- Source-specific QA/QC, if applicable
- Source-specific recalculations (including time-series consistency), if applicable

5.1.2.2 Key source 2

- See above section.

5.1.3 Non-key sources

5.1.3.1 Non-key source 1

- Methodological issues (choice of methods/AD/EF, assumptions and conventions underlying the emission and removal estimates, as well as the rationale for their selection, any specific methodological issues remind to refer to the appropriate document and reference notes)
- Uncertainties
- Source-specific verification, if applicable
- Source-specific QA/QC, if applicable
- Source-specific recalculations (including time-series consistency), if applicable

5.1.3.2 Non-key source 2

- See above section.

5.1.4 Comparison with $C0_2$ IPCC Reference Approach

5.1.5 Bunker fuels

5.1.6 Military or any other country-specific issue (N.B. sections 5.1.4-5.1.6. only in Energy sector)

5.2 Industrial Processes *(sub-sections: similar to Energy sector)*

5.3 Solvent use

5.4 Agriculture

5.5 LUCF

5.6 Waste

5.7 Other *(if applicable)*

Chapter 6 Emission trends of indirect gases and sulphur dioxide (SO_2)

References

Annexes

Annex 1 Selected CRF tables (to be determined)

- Only some tables are included here in print. The complete CRF tables for all years in electronic format are an integral part of the annual inventory submission to the UNFCCC.

Annex 2 Additional information to be considered as part of the NIR submission

- (e.g., uncertainty methodology, etc.) (where relevant)

Annex 3 Detailed methodological description (where relevant)

Annex 4 National energy balance

Annex 5 (any other relevant information - optional)

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Item 4 (a) of the provisional agenda

METHODOLOGICAL ISSUES

GUIDELINES ON REPORTING AND REVIEW OF GREENHOUSE GAS INVENTORIES FROM PARTIES INCLUDED IN ANNEX I TO THE CONVENTION (IMPLEMENTING DECISIONS 3/CP.5 AND 6/CP.5)

Report of an expert meeting to assess experiences in the use of the UNFCCC reporting and review guidelines

Note by the secretariat

Corrigendum

Paragraph 4 (c)

For the existing text subsitute

(c) FCCC/SBSTA/2002/2/Add.3: Proposal for revision of the UNFCCC guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: Reporting guidelines on annual inventories. Annex. Tables of the common reporting format.

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Addendum

PROPOSAL FOR REVISION OF THE UNFCCC GUIDELINES FOR THE TECHNICAL REVIEW OF GREENHOUSE GAS INVENTORIES FROM PARTIES INCLUDED IN ANNEX I TO THE CONVENTION

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Annex

Draft revised guidelines for the technical review of greenhouse gas inventories from Parties included in Annex I to the Convention 4

I. INTRODUCTION

A. Mandate

1. By its decision 6/CP.5, the Conference of the Parties (COP) adopted guidelines for the technical review of greenhouse gas inventories from Parties included in Annex I to the Convention (hereinafter referred to as the "review guidelines") for a trial period covering inventory submissions due in 2000 and 2001.

2. The COP requested an evaluation of the experiences during the trial period, with a view to adopting revised guidelines for the technical review of inventories at its eighth session.

3. At its fifteenth session, the Subsidiary Body for Scientific and Technological Advice (SBSTA) welcomed the organization of an expert meeting by the secretariat, to be held from 4 to 6 December 2001 in Bonn, on methodological and operational issues relating, *inter alia*, to the use of the review guidelines. In addition, the SBSTA requested the secretariat to prepare a report of the expert meeting for consideration at its sixteenth session.

4. At the expert meeting, the Chairman of the Subsidiary Body for Scientific and Technological Advice (SBSTA) proposed that the secretariat, under his guidance, prepare draft revised review guidelines taking into account the experiences of Parties, review experts and the secretariat during the trial period and the outcome of the expert meeting (FCCC/SBSTA/2002/2, paragraph 17) to facilitate consideration of this issue by the subsidiary bodies at their sixteenth session.

B. Scope of this note

5. This note responds to the mandate mentioned in paragraph 4 above. It contains a proposal for the revision of the review guidelines, which is developed to facilitate consideration of this issue during the sixteenth session of the SBSTA. This note should be read in conjunction with the report of the expert meeting (FCCC/SBSTA/2002/2).

6. The proposed draft revised review guidelines contained in the annex to this report were based on the review guidelines that were adopted by the COP at its fifth session (FCCC/CP/1999/7). The secretariat took into account the experience gained during the trial period (FCCC/SBI/2001/12 and FCCC/SBSTA/2002/5) and the recommendations of the participants at the expert meeting (see FCCC/SBSTA/2002/2). In addition, as recommended by the participants at the expert meeting, some elements from the guidelines for review under Article 8 of the Kyoto Protocol (FCCC/CP/2001/13/Add.3) that were deemed to be relevant for the completion of these draft revised guidelines were used, bearing in mind the differences between the review processes under the Convention and the Kyoto Protocol.

C. Possible action by the SBSTA

7. The SBSTA may wish to consider the information in this note and to endorse or modify the draft revised guidelines contained in the annex to this note. The SBSTA may also wish to forward the revised guidelines to the Subsidiary Body for Implementation (SBI) for its consideration and possible recommendation for adoption by the COP at its eighth session.

D. Approach

8. The draft revised guidelines contained in this note were prepared under the guidance of the Chairman of the SBSTA and with the assistance of the co-chairs of the expert meeting (Mr. William Kojo

Agyemang-Bonsu (Ghana), Ms. Dina Kruger (USA), Mr. Newton Paciornik (Brazil) and Mr. Jim Penman (United Kingdom of Great Britain and Northern Ireland)). In addition, a limited number of experts with substantial inventory review experience, who acted as lead reviewers during the trial period and who participated in the expert meeting, also accepted the invitation of the Chairman of the SBSTA to assist him in the elaboration of the draft revised guidelines prepared by the secretariat. These experts were: Mr. Ayite-Lo Ajavon (Togo), Mr. Samir Amous (Tunisia), Ms. Katarina Mareckova (Slovakia), Mr. Klaus Radunsky (Austria), Mr. Audun Rosland (Norway) and Mr. Jose Villarin (Philipinnes).

Annex

DRAFT REVISED GUIDELINES FOR THE TECHNICAL REVIEW OF GREENHOUSE GAS INVENTORIES FROM PARTIES INCLUDED IN ANNEX I TO THE CONVENTION

A. Objective

1. The objective of these guidelines is to promote consistency in the review of annual greenhouse gas (GHG) inventories of Parties included in Annex I to the Convention (Annex I Parties) and to establish a process for a thorough and comprehensive technical assessment of national inventories.

B. Purposes of the technical review of greenhouse gas inventories

2. The purpose of the technical review of Annex I Parties' GHG inventories is:

(a) To ensure that the Conference of the Parties (COP) has adequate and reliable information on annual inventories and emission trends of anthropogenic emissions by sources and removals by sinks of greenhouse gases not controlled by the Montreal Protocol;

(b) To provide the COP with an objective, consistent, transparent, thorough and comprehensive technical assessment of the annual quantitative and qualitative inventory information submitted by Annex I Parties, and a technical assessment of the implementation of Annex I Parties' commitments under Article 4, paragraph 1 (a) and Article 12, paragraph 1 (a), of the Convention;

(c) To examine, in a facilitative and open manner, the reported inventory information for consistency with the guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual inventories[1] and the *Revised 1996 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories*[2] as elaborated by the IPCC report entitled *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories;*[3]

(d) To assist Annex I Parties in improving the quality of their GHG inventories.

C. General approach

3. Greenhouse gas inventory submissions from all Annex I Parties will be subject to an annual technical review. The technical review process for GHG inventories, as outlined in these guidelines, comprises three stages which consider different aspects of the inventories in such a way that all of the purposes described above are achieved by the end of the process. The three stages are:

(a) Initial check of annual inventories;

(b) Synthesis and assessment of annual inventories; and

(c) Review of individual annual inventories.

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[1] In these guidelines, the guidelines for the preparation of national communications by Parties included in Annex I to the Convention, *Part I: UNFCCC reporting guidelines on annual inventories* are referred to as the reporting guidelines.

[2] In these guidelines, the *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories* are referred to as the IPCC Guidelines.

[3] In these guidelines, the IPCC report entitled *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories* is referred to as the IPCC good practice guidance.

4. The stages of the technical review process complement each other so that, in general, for each Party, one stage is concluded before the next one is undertaken.

5. At all stages of the inventory review process, individual Parties under review will have the opportunity to clarify issues or provide additional information. The secretariat will send to these Parties drafts of their status report, the relevant country section of the synthesis and assessment report and their individual inventory review report. Every effort will be made to reach agreement with each Party on the content of a report prior to its publication. In the case of a Party and the expert team being unable to agree on an issue, the Party may provide explanatory text to be included in a separate section of the report.

D. Initial check of annual inventories

1. Scope

6. The secretariat will conduct annually an initial check of the annual GHG inventory submissions from Annex I Parties in order to determine promptly whether the information provided is complete and in the correct format, and to enable subsequent review stages to take place.

7. The initial check will cover the national inventory submission, in particular, the data submitted electronically in the common reporting format (CRF), and will determine:

(a) Whether all sources, sinks and gases included in the IPCC Guidelines, as elaborated by the IPCC good practice guidance, are reported;

(b) Whether all tables of the common reporting format have been completed and any gaps have been explained in the CRF by use of notation keys (such as NE, NA, NO, IE, C)[4] and whether there is frequent use of these notation keys;

(c) Whether estimates for summary totals and individual source categories are provided in mass units and in CO_2 equivalent using the IPCC global warming potential (GWP) values in accordance with the relevant decisions of the COP;

(d) Whether emission estimates are provided for all required years (i.e., from the base year to the latest year in the current submission);[5]

(e) Whether methodologies are documented with notations in the CRF;

(f) Whether estimates for CO_2 emissions from fossil fuel combustion are reported using the IPCC Reference Approach in addition to estimates derived using national methods;

(g) Whether actual and potential emission estimates for hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride are reported by individual chemical species;

(h) Whether any recalculations are reported for the entire time series and explanatory information relating to these recalculations is provided in the CRF;

(i) Whether all emissions are reported without adjustments related, for example, to climate variations or trade of electricity;

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[4] NE = not estimated, NA = not applicable, NO = not occurring, IE = included elsewhere, C = confidential.

[5] In accordance with the reporting guidelines, if there are no changes in the previously submitted inventories, the national inventory report (NIR) should reference the inventory submission where the other years constitute the time series.

(j) Whether emissions from fuel used in international transportation are reported separately from national totals.

2. Status reports

8. The results of the initial check for each Annex I Party will be published on the UNFCCC web site as a status report, mainly in a tabular format. The status report will, *inter alia*:

(a) Indicate the date of receipt by the secretariat;

(b) Indicate whether the national inventory report (NIR) and the CRF have been submitted;

(c) Determine whether the inventory information has been provided in the correct format as called for in the reporting guidelines;

(d) Determine whether the submission is complete and will identify any gaps in the reported data, covering the elements listed in paragraph 7 above.

3. Timing

9. The initial check for each Annex I Party should be finalized and the status report published on the UNFCCC web site within seven weeks of the date of receipt of the submission by the secretariat. In general, the timeline for the initial check should conform to the following:

(a) The secretariat should perform the initial check and prepare a draft status report within three weeks and send it to the Party for comments;

(b) Each Party should provide comments on the draft status report within three weeks.

E. Synthesis and assessment of annual inventories

1. Scope

10. The secretariat, with the assistance of selected experts, will conduct a synthesis and assessment of Annex I Parties' greenhouse gas inventories to facilitate the consideration of inventory data and other information across Parties, and to identify issues for further consideration during the review of individual inventories.

11. The synthesis and assessment will cover the national inventory submission and previous national inventory submissions, where relevant, and will include a standardized set of data comparisons of:

(a) Implied emission factors and other inventory data across Annex I Parties to identify any irregularities or inconsistencies;

(b) Emission or removal estimates, activity data, implied emission factors and any recalculations with data from previous submissions to identify any irregularities or inconsistencies;

(c) Activity data of each Annex I Party with relevant external authoritative sources, if feasible, to identify cases where there are significant differences.

12. To facilitate the analysis of the inventory data, the secretariat will, for each individual Annex I Party, identify and consider those sources that are *key sources* both in terms of their absolute level and in terms of their trend assessment, applying the tier 1 level assessment as described in the IPCC good practice guidance. In addition, the secretariat will also consider other sources (i.e., emissions from bunker

fuels, emissions and removals from land-use change and forestry,[6] etc.) and non-key sources for which irregularities or inconsistencies are identified, based on their significance for specific sectors or for the whole GHG inventory.

2. Synthesis and assessment report

13. The results of this stage of the technical review will be published on the UNFCCC web site as a synthesis and assessment report, divided into two sections.

Section I

14. The first section of the synthesis and assessment report will provide information to allow comparisons across Annex I Parties and to describe common methodological issues. This section of the report will compile and compare information across Parties in a tabular and, as appropriate, graphical format, including:

(a) For *key sources*, based on the approach used by the secretariat, and other selected sources:

(i) Methodologies used in the preparation of the inventories;

(ii) Implied emission factors, default values and ranges contained in the IPCC Guidelines, as elaborated by the IPCC good practice guidance;

(iii) Reported activity data and data from external authoritative sources, if possible;

(iv) Other information provided in the various CRF tables;

(b) Estimates of CO_2 emissions from fuel combustion using the IPCC Reference Approach compared with estimates of CO_2 emissions from fuel combustion using a national (sectoral) approach;

(c) Estimates of actual and potential emissions of hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride and the ratio between the actual and potential emissions;

(d) Inventory recalculations.

Section II

15. The second section of the synthesis and assessment report will contain a preliminary analysis of individual Annex I Party inventories, based on the information incorporated in the first section of the report, and will, for each individual inventory:

(a) Identify issues within source or sink categories requiring further consideration or clarification during the individual review stage;

(b) Identify any recurring problems with reporting;

(c) Examine inventory recalculations and the consistency of the time series;

(d) Assess the availability of documentation on:

(i) National self-verification procedures or independent review in the technical review process;

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[6] For land-use change and forestry, good practice guidance has not, as yet, been elaborated.

(ii) The application of the IPCC good practice guidance, including estimations of uncertainties;

(e) Assess the consistency of information on methodologies and emission factors in the CRF with related information in the NIR.

3. Timing

16. The synthesis and assessment will be conducted annually and should be finalized within 20 weeks of the due date for submissions.[7] In general, the timeline for the synthesis and assessment, assuming available resources, should conform to the following:

(a) The secretariat should perform the standarized set of data comparisons mentioned in paragraph 11 above and should prepare a preliminary synthesis and assessment report containing the elements in paragraphs 14 and 15 above within eight weeks of the due date for submissions;

(b) Upon its completion, the preliminary synthesis and assessment report will be considered by six selected experts who will assess the findings included in the report and will identify, as appropriate, additional findings for individual inventories. The secretariat will prepare a final draft report taking into account the comments of the experts and will send the relevant parts of this report to Parties for comments;

(c) The Parties should provide their comments within three weeks.

17. In order to prepare the synthesis and assessment report within the timeframe mentioned in paragraph 16 (a) above, the secretariat should consider only those inventory submissions received by the due date. If possible, the secretariat should complete an assessment of the GHG inventories submitted after that date and should publish these assessments as separate documents (addenda to the synthesis and assessment report) provided that this does not delay the review process for other Annex I Parties.

F. Review of individual annual inventories

1. Scope

18. Expert review teams, coordinated by the secretariat, will conduct reviews of individual greenhouse gas inventories in order to assess whether the COP has adequate and reliable information on annual GHG inventories. The individual reviews will provide for a periodic detailed examination of the inventory estimates, procedures and methodologies used in the preparation of inventories, covering each Annex I Party's national inventory submission, supplementary material submitted by the Party and, as appropriate, previous inventory submissions. The results of this stage of the review process will be communicated to Parties.

19. Three operational approaches will be used during this stage of the technical review, namely desk reviews, centralized reviews and in-country reviews, assuming available resources. During a desk review, inventory information of Annex I Parties will be sent to experts, who will conduct the review in their own countries. During a centralized review, the experts will meet in a single location to review the inventory information of Annex I Parties. During an in-country review, experts will visit an Annex I Party to review the inventory information of this Party.

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[7] In accordance with decision 3/CP.5, the due date for submission of the GHG inventories of Annex I Parties is 15 April of each year.

20. The review of most individual inventories of Annex I Parties will be conducted annually as a desk review or as a centralized review. In addition, the GHG inventory of each Annex I Party will be subject to an in-country visit by an expert review team once every five years. In a year when an in-country review is scheduled, a desk or centralized review of the Party's GHG inventory will not take place. In-country visits will be scheduled, planned and take place with the consent of, and close coordination with, the Party subject to review.

21. In general, during a centralized review, up to six GHG inventories should be reviewed; during a desk review up to five GHG inventories should be reviewed. In organizing the individual reviews, the secretariat should ensure, to the extent possible, that the GHG inventories of all Annex I Parties will be subject to an equal number of centralized and desk reviews over a period of five years, taking into account the availability of resources.

22. Each expert review team will:

(a) Examine application of the requirements of the reporting guidelines and the IPCC Guidelines, as elaborated by the IPCC good practice guidance, and identify any departure from these requirements;

(b) Examine whether the IPCC good practice guidance was applied and documented, in particular noting the identification of key source categories, selection and use of methodologies and assumptions, development and selection of emission factors, collection and selection of activity data, reporting of recalculations and consistent time-series, reporting of uncertainties related to inventory estimates, methodologies used for estimating those uncertainties and quality assurance and quality control procedures, and identify any inconsistencies;

(c) Identify any missing sources and examine whether any explanatory information relating to their exclusion from the GHG inventory has been provided;

(d) Identify the reason for any differences between the Party's and the secretariat's key source determination;

(e) Assess the consistency of information in the CRF with that in the NIR;

(f) Assess the extent to which issues raised in the synthesis and assessment report and issues and questions raised by expert review teams in previous reports have been addressed and resolved;

(g) Identify areas for further improvement of the inventories and note possible ways for improving the estimation and the reporting of inventory information.

23. In addition to the tasks mentioned in paragraph 22 above, expert review teams conducting in-country reviews will consider the "paper trail" of the inventory from the collection of data to the reported emission estimates and will examine procedures and institutional arrangements for inventory development and management, including record-keeping and documentation procedures. During subsequent desk or centralized reviews, the expert review teams will identify any changes that may have occurred in these procedures and institutional arrangements, based on the information provided in the NIRs of Annex I Parties.

24. The expert review team may use relevant technical information in the review process, such as information from international organizations.

2. Expert review teams

General procedures

25. Each GHG inventory submission will be assigned to a single expert review team that will be responsible for performing the review in accordance with the procedures and time frames established in these guidelines. A submission by an Annex I Party will not be reviewed in two successive years by expert review teams with an identical composition.

26. Each expert review team will provide a thorough and comprehensive technical assessment of the GHG information submitted and will, under its collective responsibility, prepare a review report in accordance with the provisions of these guidelines.

27. Expert review teams will be coordinated by the secretariat which will provide administrative support, and, as appropriate, technical and methodological assistance and assistance in the use of the UNFCCC guidelines.

28. Expert review teams will be composed of experts selected on an ad hoc basis from the UNFCCC roster of experts and will include lead reviewers. Experts will be nominated by Parties to the Convention to the roster of experts and, as appropriate, by intergovernmental organizations, in accordance with guidance provided for this purpose by the COP. Participating experts will serve in their personal capacity and will neither be nationals of the Party under review nor be nominated or funded by that Party.

29. In the conduct of the review, expert review teams shall adhere to these guidelines and work on the basis of established and published procedures, including quality assurance and control and confidentiality provisions.

30. The secretariat will notify Annex I Parties about up-coming desk and centralized reviews, and ask the Parties to identify the contact person(s) through whom enquiries could be directed. Communication between the expert review teams and the Party under review should be through the lead reviewers and the designated contact person(s) of the Party. Other members of the expert review team may communicate enquiries regarding the area of the GHG inventory that they review to other national experts involved in the GHG inventory preparation only if a Party so agrees. Information thus obtained should be made available to other members of the team.

31. Participating experts from Parties not included in Annex I to the Convention (non-Annex I Parties) and Annex I Parties with economies in transition will be funded according to the existing procedures for participation in UNFCCC activities. Experts from other Annex I Parties will be funded by their governments.

Composition of the expert review teams

32. Participating experts shall have experience in the area of GHG inventories in general and/or in specific sectors (Energy, Industrial Processes, Solvents and Other Products Use, Agriculture, Land-Use Change and Forestry and Waste).

33. Expert review teams may vary in size and composition, taking into account the national circumstances of the Party under review and the different expertise needs. In general, the normal size of the expert review teams should be:

(a) Six experts for in-country visits (one expert per inventory sector[8] plus one generalist[9]);

(b) Twelve experts for desk and centralized reviews (two experts per inventory sector[8] plus two generalists[9]).

34. The secretariat will select the members of the review teams in a way that will ensure that the collective skills of the team address the areas mentioned in paragraph 32 above and that most experts in the ERTs have the necessary experience in the review process. The secretariat will select national inventory experts with limited or no experience of the review process and invite one of these experts to participate in each in-country review, with a maximum of five experts to participate in each centralized review. These experts with limited or no experience of the review process will work on a specific IPCC sector together with an expert with experience of the review process. Desk reviews will be conducted only by experienced experts.

35. The secretariat will select the members of the expert review teams with a view to achieving a balance between experts from Annex I Parties and non-Annex I Parties in the overall composition of the expert review teams, without compromising the selection criteria referred to in paragraph 32 above. The secretariat shall make every effort to ensure geographical balance among those experts selected from non-Annex I Parties and among those experts selected from Annex I Parties.

36. Without compromising the criteria stated in paragraphs 32 to 35 above, the formation of expert review teams should ensure, to the extent possible, that at least one member is fluent in the language of the Party under review.

Lead reviewers

37. For each expert review team, two inventory experts with substantial inventory review experience will serve as lead reviewers. One lead reviewer will be from a non-Annex I Party and one from an Annex I Party.

38. Lead reviewers should ensure that the review in which they participate is performed according to these guidelines and is performed consistently across all Parties under review by the expert review team. They should also ensure the quality and the objectivity of the technical assessments in the reviews.

39. With the support of the secretariat, lead reviewers will:

(a) Prepare a brief work plan for the review activity;

(b) Verify that the experts have all the necessary information provided by the secretariat prior to the review activity;

(c) Monitor the progress of the review activity;

(d) Ensure that there is good communication within the expert review team;

(e) Coordinate queries of the expert review team to the Party and coordinate the inclusion of the answers in the review reports;

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[8] The expert(s) dealing with the Industrial Processes sector should also be responsible for the Solvents and Other Products Use sector, which, in general, does not constitute a major source of GHG emissions.

[9] The term "generalist" in these guidelines is used for experts who have broad knowledge of all areas of the inventory process.

(f) Provide technical advice to the ad hoc experts, if needed;

(g) Ensure that the review is performed and the review report is prepared in accordance with these guidelines; and

(h) Verify that the review team gives priority to individual source categories for review in accordance with these guidelines.

3. Individual review reports

40. Under its collective responsibility, the expert review team will produce an individual inventory review report for publication in electronic format on the UNFCCC web site based on the results of the tasks listed in paragraph 22 above. The review reports should contain an objective assessment of the adherence of the inventory information to the reporting guidelines and the provisions of relevant decisions by the COP and should not contain any political judgement.

41. The report of all in-country reviews should not exceed 25-30 pages including a 2-3 page summary. For desk and centralized reviews, the report should not exceed 10 pages and should focus on particular strengths and identified problems as well as on an overall appraisal of the quality and reliability of the inventory, emission trends, actual emission factors and activity data, and on the degree of adherence to the reporting guidelines and the IPCC good practice guidance. Both types of review reports should include standardized tables, whenever possible, to increase the efficiency of communication.

4. Timing

42. The secretariat should forward all relevant information to the members of the expert review teams one month prior to the start of the review activities. Each desk or centralized review should be completed within 20 weeks and each in-country review should be completed within 14 weeks. In general, the timeline for the individual review activities, assuming available resources, should conform to the following:

(a) *Desk review*: each expert review team performs individual reviews and prepares draft review reports within seven weeks (three weeks for individual reviews and four weeks for the preparation of the reports). The secretariat edits and formats the reports and sends them to Parties for comments. The Parties respond within four weeks. The expert review team integrates the Parties' comments within four weeks and sends the revised versions of the reports to the secretariat. The final reports are published on the UNFCCC web site within two weeks.

(b) *Centralized review*: each expert review team performs individual reviews and prepares draft review reports within seven weeks (one week for individual reviews and six weeks for the preparation of the reports). The secretariat edits and formats the reports and sends them to Parties for comments. The Parties respond within four weeks. The expert review team integrates the Parties' comments within four weeks and sends the revised versions of the reports to the secretariat. The final reports are published on the UNFCCC web site within two weeks.

(c) *In-country review*: each expert review team performs the individual review within one week and prepares a draft review report within three weeks. The secretariat edits and formats the report and sends it to the Party for comments. The Party responds within four weeks. The expert review team integrates the Party's comments within three weeks and sends the revised version of the report to the secretariat. The final report is published on the UNFCCC web site within one week.

G. Annual report of emissions and trends of greenhouse gases

43. As part of the technical review of annual national GHG inventories, the secretariat will also compile and tabulate aggregate information and trends concerning greenhouse gas emissions by sources and removals by sinks, and any other inventory information in a stand-alone document to be published electronically on the UNFCCC web site. This document will draw information from the latest available GHG inventory submissions of all Annex I Parties and will serve to provided aggregate information to the COP on GHG emissions by sources and removals by sinks and their trends for all Annex I Parties. This document may also be used as an input to the third stage of the technical review process.

44. A summary of the document mentioned in paragraph 43 above will be published in both hard copy and electronic format for the consideration of the COP and the subsidiary bodies.[10] This summary will include trends of GHG emissions by sources and removals by sinks and an assessment of the adherence of the reported inventory information to the reporting guidelines, as well as to the provisions of relevant decisions by the COP, including, *inter alia*, information on any delays in submitting the annual inventory information.

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[10] In order to ensure the quality and timeliness of the information included in this summary, the secretariat will prepare this report for the consideration of the Convention bodies during the second sessional period scheduled for each year.

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METHODOLOGICAL ISSUES

GUIDELINES ON REPORTING AND REVIEW OF GREENHOUSE GAS INVENTORIES FROM PARTIES INCLUDED IN ANNEX I TO THE CONVENTION (IMPLEMENTING DECISIONS 3/CP.5 AND 6/CP.5)

Report of an expert meeting to assess experiences in the use of the UNFCCC reporting and review guidelines

Note by the secretariat

Addendum

PROPOSAL FOR REVISION OF THE GUIDELINES FOR THE PREPARATION OF NATIONAL COMMUNICATIONS BY PARTIES INCLUDED IN ANNEX I TO THE CONVENTION, PART I: UNFCCC REPORTING GUIDELINES ON ANNUAL INVENTORIES

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Annex

Draft revised guidelines for the preparation of National Communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual inventories 4

I. INTRODUCTION

A. Mandate

1. By its decision 3/CP.5, the Conference of the Parties (COP) adopted guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual inventories (hereinafter referred to as the "reporting guidelines").

2. The COP decided that revisions to these guidelines, shall be considered by the Subsidiary Body for Scientific and Technological Advice (SBSTA) at its fifteenth session with a view to submitting a decision for adoption by the COP at its seventh session.

3. The COP requested the secretariat to prepare a report on the use of these guidelines, in particular the common reporting format (CRF), taking into account, *inter alia*, the experiences of Parties in using the guidelines, and by the secretariat in processing the CRF for consideration of possible revisions of the reporting guidelines by the SBSTA at its fifteenth session. The SBSTA at its twelfth session requested the secretariat, in the report on the use of the reporting guidelines, to consider whether any modifications to the reporting guidelines are needed to reflect the good practice guidance.

4. The COP by its decision 34/CP.7 decided to defer the revision of the reporting guidelines until the sixteenth session of the SBSTA with a view to adopting a decision at its eighth session.

5. At its fifteenth session, the Subsidiary Body for Scientific and Technological Advice (SBSTA) welcomed the organization of an expert meeting by the secretariat, held from 4 to 6 December 2001 in Bonn, on methodological and operational issues relating, *inter alia*, to the use of the reporting guidelines. In addition, the SBSTA requested the secretariat to prepare a report of the expert meeting for consideration at its sixteenth session.

6. At the expert meeting, the Chairman of the SBSTA proposed that the secretariat, under his guidance, prepare draft revised reporting guidelines taking into account the experiences of Parties in using the guidelines and the secretariat in processing the common reporting format, as well as the outcome of the expert meeting (FCCC/SBSTA/2002/2) in order to facilitate consideration of the revised reporting guidelines by the Subsidiary Bodies at their sixteenth session.

B. Scope of this note

7. This note, responds to the mandate mentioned in paragraph 6 above. It contains a proposal for the revision of the reporting guidelines, which has been developed to facilitate consideration of this issue during the sixteenth session of the SBSTA. This note should be read in conjunction with the report of the expert meeting (FCCC/SBSTA/2002/2) and the proposal for revision of the CRF tables (FCCC/SBSTA/2002/2/Add.3).

8. The proposed draft revised reporting guidelines contained in the annex to this report were based largely on the reporting guidelines that were adopted by the COP at its fifth session (FCCC/CP/1999/7). The secretariat took into account the experiences of Parties in using the reporting guidelines and the secretariat in processing the CRF and coordinating the technical review process, as described in documents FCCC/SBSTA/2001/MISC.4, FCCC/SBSTA/2001/MISC.5, FCCC/SBSTA/2001/5 and Add.1, as well as the recommendations of the participants at the expert meeting (see FCCC/SBSTA/2002/2).

9. The draft revised reporting guidelines also include draft revised CRF tables that are an integral part of the reporting guidelines. For technical reasons, the CRF tables are included in an independent

document, namely FCCC/SBSTA/2002/2/Add.3. The tables contained in this addendum constitute annex II of the draft reporting guidelines.[1]

C. Possible action by the SBSTA

10. The SBSTA may wish to consider the information in this note and to endorse or modify the draft revised guidelines contained in the annex to this note. The SBSTA may also wish to forward the revised guidelines to the Subsidiary Body for Implementation (SBI) for its consideration and possible recommendation for adoption by the COP at its eighth session.

D. Approach

11. The draft revised guidelines contained in this note were prepared under the guidance of the Chairman of the SBSTA and with the assistance of the co-chairs of the expert meeting (Mr. William Kojo Agyemang-Bonsu (Ghana), Ms. Dina Kruger (United States of America), Mr. Newton Paciornik (Brazil) and Mr. Jim Penman (United Kingdom of Great Britain and Northern Ireland)). In addition, a limited number of experts with substantial inventory review experience, who acted as lead reviewers during the trial period and who participated in the meeting, also accepted the invitation of the Chairman of the SBSTA to assist him in the elaboration of the draft revised guidelines. These experts were: Mr. Ayite-Lo Ajavon (Togo), Mr. Samir Amous (Tunisia), Ms. Katarina Mareckova (Slovakia), Mr. Klaus Radunsky (Austria), Mr. Audun Rosland (Norway) and Mr. Jose Villarin (Philippines).

12. In these guidelines, as indicated in paragraph 19 and table 1, Parties should report aggregate emissions and removals of GHGs, expressed in CO_2 equivalent terms, using the global warming potential (GWP) provided by the IPCC in its "Second Assessment Report", consistent with decision 2/CP.3. The secretariat would like to draw attention to the IPCC "Third Assessment Report", which provides updated values of the GWP.

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[1] Annex I of these reporting guidelines contains the proposed structure for the national inventory report (NIR) (see page 16).

Annex

DRAFT REVISED GUIDELINES FOR THE PREPARATION OF NATIONAL COMMUNICATIONS BY PARTIES INCLUDED IN ANNEX I TO THE CONVENTION, PART I: UNFCCC REPORTING GUIDELINES ON ANNUAL INVENTORIES

A. Objectives

1. The objectives of the UNFCCC reporting guidelines on annual inventories are:

(a) To assist Annex I Parties in meeting their commitments under Articles 4 and 12 of the Convention and in preparing to meet possible future commitments under Articles 3, 5 and 7 of the Kyoto Protocol;

(b) To facilitate the process of considering annual national inventories, including the preparation of technical analysis and synthesis documentation; and

(c) To facilitate the process of verification, technical assessment and expert review of the inventory information.

B. Principles and definitions

2. National greenhouse gas inventories, referred to below only as inventories, should be transparent, consistent, comparable, complete and accurate.

3. Inventories should be prepared using comparable methodologies agreed upon by the COP, as indicated in paragraph 8 below.

4. In the context of these UNFCCC reporting guidelines on annual inventories:

Transparency means that the assumptions and methodologies used for an inventory should be clearly explained to facilitate replication and assessment of the inventory by users of the reported information. The transparency of inventories is fundamental to the success of the process for the communication and consideration of information;

Consistency means that an inventory should be internally consistent in all its elements with inventories of other years. An inventory is consistent if the same methodologies are used for the base and all subsequent years and if consistent data sets are used to estimate emissions or removals from sources or sinks. Under certain circumstances referred to in paragraphs 14 and 15, an inventory using different methodologies for different years can be considered to be consistent if it has been recalculated in a transparent manner, in accordance with the IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories;[2]

Comparability means that estimates of emissions and removals reported by Parties in inventories should be comparable among Parties. For this purpose, Parties should use the methodologies and formats agreed by the COP for estimating and reporting inventories. The allocation of different source/sink categories should follow the split of the Revised 1996 Intergovernmental Panel on Climate Change Guidelines for National Greenhouse Gas Inventories,[3] at the level of its summary and sectoral tables;

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[2] Hereinafter referred to as the "IPCC good practice guidance". The IPCC is currently developing "Good Practice Guidance for Land Use, Land-Use Change and Forestry".

[3] Hereinafter referred to as the "IPCC Guidelines".

Completeness means that an inventory covers all sources and sinks, as well as all gases, included in the IPCC Guidelines as well as other existing relevant source/sink categories which are specific to individual Parties and, therefore, may not be included in the IPCC Guidelines. Completeness also means full geographic coverage of sources and sinks of a Party;[4] and

Accuracy is a relative measure of the exactness of an emission or removal estimate. Estimates should be accurate in the sense that they are systematically neither over nor under true emissions or removals, as far as can be judged, and that uncertainties are reduced as far as practicable. Appropriate methodologies should be used, in accordance with the IPCC good practice guidance, to promote *accuracy* in inventories.

5. In the context of these guidelines, definitions of common terms used in greenhouse gas inventory preparation are those provided in the IPCC good practice guidance.

C. Scope

6. These UNFCCC reporting guidelines on annual inventories cover the estimation and reporting of greenhouse gas emissions and removals in both annual inventories and inventories included in national communications, as specified by decision 11/CP.4 and other relevant decisions of the COP.

D. Base year

7. The year 1990 should be the base year for the estimation and reporting of inventories. According to the provisions of Article 4.6 of the Convention and decisions 9/CP.2 and 11/CP.4, the following Annex I Parties that are undergoing the process of transition to a market economy are allowed to use a base year or a period of years other than 1990, as follows:

Bulgaria:	to use 1988
Hungary:	to use the average of the years 1985 to 1987
Poland:	to use 1988
Romania:	to use 1989
Slovenia:	to use 1986

E. Methods

Methodology

8. Parties shall use the IPCC Guidelines, to estimate and report on anthropogenic emissions by sources and removals by sinks of greenhouse gases not controlled by the Montreal Protocol. In preparing national inventories of these gases Parties should also use the IPCC good practice guidance, agreed upon by the SBSTA, in order to improve transparency, consistency, comparability, completeness and accuracy.

9. In accordance with the IPCC Guidelines, Parties may use different methods (tiers) included in those guidelines, giving priority to those methods which, according to the decision trees in the IPCC good practice guidance, produce the most accurate estimates. National methodologies used by Parties to better reflect their national circumstances should be compatible with the IPCC Guidelines and the IPCC good practice guidance and be well documented.

10. Parties may use different levels of disaggregation of source categories in accordance with their own way of preparing greenhouse gas inventories. For source categories that are key, estimated in accordance

[4] According to the instruments of ratification, acceptance, approval or accession to the Convention of a given Party.

with the provisions in paragraph 12 below, Parties should make every effort to use a recommended method, in accordance with the corresponding decision trees of the IPCC good practice guidance.

11. The IPCC Guidelines offer a default methodology which includes default emission factors and in some cases default activity data. As these default data, factors and assumptions may not always be appropriate for specific national contexts, it is preferable for Parties to use their own national emission factors and activity data, where available, provided that they are developed in a manner consistent with the IPCC good practice guidance and are considered to be more accurate, and the reporting of the emission and removal estimates and their underlying data is transparent. The revised default activity data or emission factors provided in the IPCC good practice guidance shall be used, where available, if Parties choose to use default factors or data due to lack of country-specific information.

Key source category determination

12. Parties should identify their national key source categories for the base year and the latest reported inventory year, as described in the IPCC good practice guidance, using the tier 1 or tier 2 level and trend assessment.

Uncertainties

13. Parties should quantitatively estimate the uncertainties of each IPCC source category and for the inventory totals by using at least the tier 1 method, as provided in the IPCC good practice guidance. Alternatively, Parties may also use the tier 2 method in the good practice guidance when such data are available.

Recalculations

14. The inventories of an entire time series, including the base year and all subsequent years for which inventories have been reported, should be estimated using the same methodologies, and the underlying activity data and emission factors should be obtained and used in a consistent manner. Recalculations should ensure consistency of the time series and shall be carried out only to improve accuracy and/or completeness. Where the methodology or manner in which underlying activity data and emission factors are gathered has changed, Parties should recalculate inventories for the base and subsequent years. Parties should evaluate the need for recalculations relative to the reasons provided by the IPCC good practice guidance, in particular for key sources.

15. However, in some cases activity data may be missing for some historical years, including the base year. In this case, emissions or removals for these years may need to be recalculated with alternative methodologies. In these instances, Parties should use one of the techniques provided by the IPCC good practice guidance. Parties should demonstrate that the time series is consistent.

Quality assurance/quality control (QA/QC)

16. Parties should develop an inventory QA/QC plan in accordance with the IPCC good practice guidance. Parties should implement QC procedures, including at least the tier 1 general inventory level procedures as outlined in table 8.1 of the IPCC good practice guidance. Parties are also encouraged to implement tier 2 QA/QC for key sources.

F. Reporting

1. General guidance

Estimates of emissions and removals

17. Article 12.1(a) of the Convention requires that each Party shall communicate to the COP, through the secretariat, *inter alia*, a national inventory of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol. As a minimum requirement, inventories shall contain information on the following six greenhouse gases: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), and sulphur hexafluoride (SF_6). Parties should report emissions and removals of any other greenhouse gases whose 100-year GWP values have been identified by the IPCC and adopted by the COP. Parties should also provide information on the following indirect greenhouse gases: carbon monoxide (CO), nitrogen oxides (NO_x) and non-methane volatile organic compounds (NMVOCs), as well as sulphur oxides (SO_x).

18. Greenhouse gas emissions and removals should be presented on a gas-by-gas basis in units of mass with emissions by sources listed separately from removals by sinks, except in cases where it may be technically impossible to separate information on sources and sinks in the areas of land use, land-use change and forestry. For HFCs and PFCs, emissions should be reported for each relevant chemical in the category on a disaggregated basis except in cases where paragraph 23 applies.

19. In addition, consistent with decision 2/CP.3, Parties should report aggregate emissions and removals of greenhouse gases, expressed in CO_2 equivalent terms at summary inventory level[5], using GWP values provided by the IPCC in its Second Assessment Report, referred to below as 1995 IPCC GWP values, based on the effects of greenhouse gases over a 100-year time horizon. A list of these values is given in table 1 at the end of this document. Table 1 will be amended to include any additional greenhouse gases and their 100-year GWP values or new GWP values of the gases included in table 1, once the GWP values have been adopted by the COP.

20. Consistent with decision 2/CP.3, Parties should report actual emissions of HFCs, PFCs and SF_6, where data are available, providing disaggregated data by chemical (for example, HFC-134a) and source category in units of mass and in CO_2 equivalents. Parties should make every effort to develop the necessary sources of data for reporting actual emissions. For the source categories where the concept of potential emissions applies, and Parties do not yet have the necessary data to calculate actual emissions, Parties should report disaggregated potential emissions. Parties reporting actual emissions should also report potential emissions for the sources where the concept of potential emissions applies, for reasons of transparency and comparability.

21. Parties are strongly encouraged to also report emissions and removals of greenhouse gases for which 100-year GWP values are available, but not yet adopted by the COP. These emissions and removals should be reported separately from national totals. The GWP value and reference should be indicated.

22. In accordance with the IPCC Guidelines, international aviation and marine bunker fuel emissions should not be included in national totals but should be reported separately. Parties should make every effort to both apply and report according to the IPCC good practice guidance method for separation between domestic and international emissions. Parties should also report emissions from international aviation and marine bunker fuels as two separate entries in their inventories.

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[5] CO_2 equivalent emissions should be provided at a level of category disaggregation similar to that of the summary table 7A of the IPCC Guidelines.

23. Emissions and removals should be reported on the most disaggregated level of each source/sink category, taking into account that a minimum level of aggregation may be required to protect confidential business and military information.

Completeness

24. Where methodological or data gaps in inventories exist, information on these gaps should be presented in a transparent manner. Parties should clearly indicate the sources and sinks not considered in their inventories but which are included in the IPCC Guidelines, and explain the reasons for such exclusion. In addition, Parties should use the notation keys presented below to fill in the blanks in all the tables in an inventory. This approach facilitates assessment of the completeness of an inventory. The notation keys are as follows:[6]

(a) "NO" (not occurring) for emissions by sources and removals by sinks of greenhouse gases that do not occur for a particular gas or source/sink category within a country;

(b) "NE" (not estimated) for existing emissions by sources and removals by sinks of greenhouse gases which have not been estimated. "NE" should also be used when no estimate is reported because the source is considered very small. Where "NE" is used in an inventory for emissions or removals of CO_2, N_2O, CH_4, HFCs, PFCs, or SF_6, the Party should indicate in both the NIR and the CRF completeness table why emissions could not be estimated;

(c) "NA" (not applicable) for activities in a given source/sink category that do not result in emissions or removals of a specific gas. If categories in the common reporting format for which "NA" is applicable are shaded, they do not need to be filled in;

(d) "IE" (included elsewhere) for emissions by sources and removals by sinks of greenhouse gases estimated but included elsewhere in the inventory instead of the expected source/sink category. Where "IE" is used in an inventory, the Party should indicate, using the CRF completeness table, where in the inventory the emissions or removals from the displaced source/sink category have been included and the Party should explain such a deviation from the expected category; and

(e) "C" (confidential) for emissions by sources and removals by sinks of greenhouse gases which could lead to the disclosure of confidential information, given the provisions of paragraph 23 above.

25. If Parties estimate emissions and removals from country-specific sources or sinks or of gases which are not part of the IPCC Guidelines, they should explicitly describe what source/sink categories or gases these are, as well as what methodologies, emission factors and activity data have been used for their estimation.

Key sources

26. Parties should estimate and report the percentage contribution of key source categories to their national total, to the cumulative emission level and to the emission trend. They should all be expressed in terms of CO_2 equivalent using the methods provided in the IPCC good practice guidance. This information should be included in the CRF as well as the NIR as indicated in paragraphs 38 and 46.

Verification

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[6] The notation key "0" is removed. Parties should either report the emission estimate if calculated, even though it is negligible, or use the notation key "NE". If the notation key "NE" is used Parties should provide an explanation in the completeness table on why the source category has not been estimated.

27. In accordance with the IPCC Guidelines, as well as for verification purposes, Parties should compare their national estimates of carbon dioxide emissions from fuel combustion with those estimates obtained using the IPCC Reference Approach, and report on them in annual inventories. Parties are also encouraged to report on any peer review of their inventory conducted nationally.

Uncertainties

28. Parties should report, in the NIR, uncertainties estimated as indicated in paragraph 13 above, as well as methods used and underlying assumptions with the purpose of helping prioritize efforts to improve the accuracy of national inventories in the future and guide decisions on methodological choice. If the methods used to estimate the level of uncertainty depart from the IPCC good practice guidance, these methods should be described. Quantitative information related to key sources should be reported in the CRF.

Recalculations

29. Recalculations of previously submitted estimates of emissions and removals as a result of changes in methodologies, changes in the manner in which emission factors and activity data are obtained and used or the inclusion of new sources or sinks, which have existed since the base year but were not previously reported, should be reported for the base year and all subsequent years up to the year in which the recalculations are made.

30. Recalculations should be reported in the NIR, with explanatory information, and in the relevant CRF tables. Recalculations should result in an improvement in the accuracy and completeness of the inventory and ensure the consistency of the time series. In this regard, Parties should report justifications for the recalculations. Parties should also provide explanations for those cases in which they have not recalculated an estimate when such a recalculation is called for in IPCC good practice guidance. Information on the procedures used for performing the recalculations, changes in the calculation methods, emission factors and activity data used and the inclusion of sources or sinks, should be reported with an indication of the relevant changes in each source or sink category where these changes have taken place. For key sources, Parties should include this information in the NIR, as indicated in paragraph 38 below.

31. Parties should report any other changes in estimates of emissions and removals, regardless of magnitude, and clearly indicate the reason for the changes compared with previously submitted inventories, e.g., error correction, statistical or editorial changes or reallocation of sources, using the corresponding CRF table, as indicated in paragraph 46 and outlined in annex II of these guidelines.

QA/QC

32. Parties should report on their QA/QC plan and give information on QA/QC procedures already implemented or to be implemented in the future in the NIR.

Adjustments[7]

33. Inventories are to be reported without adjustments related, for example, to climate variations or trade patterns of electricity. If Parties, in addition, carry out such adjustments to inventory data, they should be reported separately and in a transparent manner, with clear indications of the method followed.

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[7] The adjustments referred to here are related to e.g., climate variations or trade patterns of electricity. They do not refer to adjustments under Article 5.2 of the Kyoto Protocol.

34. Adjustments are regarded as important information for monitoring emission and removal trends and the performance of national policies and measures. Individual Parties may choose whether to make adjustments in addition to reporting unadjusted inventory data, and if so, they should indicate which methods have been chosen. Parties are further encouraged to share with others their experiences in making adjustments.

2. National inventory report

35. Parties shall submit to the Conference of the Parties, through the secretariat, an NIR containing detailed and complete information on their inventories. The NIR should ensure transparency and contain sufficiently detailed information to enable the inventory to be reviewed. This information should cover the base year[8] and the latest inventory year and any changes to previously submitted inventories. If previously submitted inventories remain unchanged, the NIR should reference the inventory submission in which the unchanged data was reported originally.

36. The NIR shall be submitted annually in its entirety to the COP, through the secretariat, in accordance with the relevant decisions of the COP, either as a printed document or electronically, and it should be updated annually to reflect changes.

37. Parties shall publish their NIRs and may fulfil that obligation by keeping the NIR in its entirety on their national web sites. If the NIR is posted on a national web site, the address of the exact location should be indicated in the CRF and in the NIR.

38. The NIR should include:

(a) Annual inventory information, submitted in accordance with paragraphs 35 above and 42 below;

(b) A description of the specific methodologies and assumptions used in each sector, including an indication of the level of complexity (IPCC tiers) applied and a description of any national methodology used by the Party, as well as information on anticipated future improvements in methodologies;

(c) References or sources of information related to methodologies, emission factors and activity data, as well as the rationale for their selection. For key sources, an explanation should be provided if the recommended methods from the appropriate decision tree in the IPCC good practice guidance are not used. In addition, any use of emission factors or activity data for key sources that depart from the IPCC good practice guidance should be justified;

(d) Information on assumptions and conventions underlying the emission and removal estimates, as well as the rationale for their selection;

(e) A description of the national key sources as indicated in paragraph 26,[9] including:

(i) Reference to the key source tables in the CRF;

(ii) Information on the level of source category disaggregation used and its rationale;

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[8] According to the provisions of Article 4.6 of the Convention and decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition are allowed to use base years other than 1990, as mentioned in paragraph 7 above.

[9] The secretariat will also perform a standardized key source determination for all Parties, based on Table 7.1 of the IPCC good practice guidance. Parties may also use this approach if it is consistent with the way they prepare their inventories.

(iii) Additional information related to the methodology used for identifying key sources;

(f) With regard to possible double counting or non-counting of emissions, Parties should indicate in the corresponding sectoral part of the NIR:

(i) Whether feedstocks have been accounted for in the inventory, and if so, where they have been accounted for in the energy or industrial processes sector;

(ii) Whether CO_2 from agricultural soils has been estimated and if so, where it has been accounted for in the agriculture sector (under category 4.D – Agricultural soils) or in the LUCF sector (category 5.D – CO_2 Emissions and removals from soil);

(g) Parties are encouraged to provide background data and descriptions of methodologies used to estimate emissions/sinks from the LUCF sector to enhance transparency;[10]

(h) Information on uncertainties, as requested in paragraph 28 above;

(i) Information on any recalculations related to previously submitted inventory data, as requested in paragraphs 29 to 31 above;

(j) The NIR should include information on QA/QC as requested in paragraph 32 above, describing the QA/QC activities for individual source categories, in particular key sources, and the entire inventory performed internally, as well as on the external reviews conducted, if any. Key findings on the quality of the input data, methods, processing and archiving and how they have been addressed, should be described;

(k) A separate section clearly identifying changes from previous years, including the changes in methodologies, sources of information and assumptions, as well as changes in response to the review process; and

(l) A description of the institutional arrangements for inventory preparation.

39. If any of the information required under subparagraphs (a) to (k) above is provided in detail in the CRF, Parties should indicate in the NIR where in the CRF this information is provided.

40. The NIR should be reported in accordance with the outline included in annex I of these guidelines, ensuring that all requested information in paragraph 38 above is included.

3. Common reporting format

41. The common reporting format is designed to ensure that Parties report quantitative data in a standardized format and to facilitate comparison of inventory data and trends among Parties. Explanation of information of a non-quantitative character should mainly be provided in the NIR rather than in the CRF tables. The CRF should include a specific cross-reference to the corresponding section of the NIR.

42. Parties shall submit annually to the COP, through the secretariat, the information required in the CRF as contained in the annex II to these guidelines.[11] This information shall be submitted on an annual

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[10] The SBSTA may wish to consider this issue when the development of guidance on good practices for the LUCF sector by the IPCC is completed and, as appropriate, expand this sub-paragraph in any subsequent revisions of these guidelines.

basis for the last but one year prior to the year of submission, in accordance with paragraph 6. It should be formally submitted in both electronic form and hard copy. The CRF is an integral part of the NIR referred to in section 2 above.

43. The information provided by the CRF is aimed at enhancing the comparability and transparency of inventories by facilitating, *inter alia*, activity data and aggregate emission factor cross-comparisons among Parties, and easy identification of possible mistakes, misunderstandings and omissions in the inventories.

44. The CRF is a standardized format for reporting estimates of greenhouse gas emissions and removals and other relevant information. An electronic version will be supplied to Parties by the secretariat and will also be available on the UNFCCC web site (see FCCC/SBSTA/2002/2/Add.3). The CRF allows for the improved handling of electronic submissions and facilitates the processing of inventory information and the preparation of useful technical analysis and synthesis documentation.

45. The CRF follows the source/sink category split of the IPCC sectoral tables. It provides minimum information on methods, aggregate emission factors and activity data, as well as relevant assumptions that underlie the estimates given in the sectoral tables.

46. The CRF consists of:

(a) Summary, sectoral and trend tables;

(b) Sectoral background data tables for reporting aggregate emission factors[12] and activity data, including:

(i) The IPCC worksheet 1-1 containing estimates of CO_2 emissions from fuel combustion using the IPCC Reference Approach and a table for comparing estimates under this Reference Approach with national estimates, as well as providing explanations of any significant differences;[13] and

(ii) Tables for reporting feedstocks, international bunkers and multilateral operations; and

(c) Tables for reporting, *inter alia*, key sources, uncertainty, recalculations and completeness of the inventory.

47. The CRF should be reported in accordance with the tables included in annex II to these guidelines, ensuring that all requested information in paragraph 46 above is included.[14] In completing these tables Parties should:

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[11] Annex II of the reporting guidelines is not included in this note on a draft revision of the guidelines. The CRF tables are contained in FCCC/SBSTA/2002/2/Add.3. When the COP adopts these guidelines, both the guidelines and the CRF tables will be included in the same document.

[12] The sectoral background tables were designed to allow calculation of aggregate (implied) emission factors. These are top-down ratios between a Party's emissions estimate and aggregate activity data. The implied emission factors are intended solely for purposes of data comparison. They will not necessarily be the emission factors actually used in the original emissions estimate, unless this was a simple multiplication based on the same aggregate activity data used to calculate the implied emission factor.

[13] Detailed explanations should be included in the NIR.

[14] Annex II of the reporting guidelines is not included in this note on draft revision of the guidelines. The CRF tables are contained in FCCC/SBSTA/2002/2/Add.3. When the COP adopts these guidelines both the guidelines, and the CRF tables will be included in the same document.

(a) Provide the full CRF for the latest inventory year and for those years for which any change in any sector has been made. For years where no changes are made, re-submission of full CRF tables is not necessary, but a reference should be made to the inventory submission in which the unchanged data were reported originally;

(b) Provide the CRF trend tables covering inventory years for the entire time series in one submission only, that is, in the CRF for the last inventory year;

(c) Provide completeness and/or uncertainty tables in one submission only if the information applies to all years. If the information in these tables differs for each reported year, then either the tables or information on the specific changes must be provided for each year in the CRF; and

(d) Use the documentation boxes provided at the foot of the sectoral background data tables to provide references to detailed explanations in the NIR, or any other information, as specified in those boxes.

48. Parties should provide the information requested in the additional information boxes. Where the information called for is inappropriate because of the methodological tier used by the Party, the corresponding cells should be completed using the notation key "NA". In such cases, the Parties should reference in the documentation box the relevant section in the NIR where equivalent information can be found.

49. Parties should use the notation keys, as specified in paragraph 24 above, in all tables of an inventory, to fill in the cells where there is no estimate of emissions. The notation keys should be limited to those cells where data is otherwise entered. Using the notation keys in this way facilitates the assessment of the completeness of an inventory. For the use of notation keys in CRF tables where non-quantitative information is required, specific guidance on how they should be used in each table is provided.

50. Neither the order nor the notations of the columns, rows or cells should be changed in the tables because this will complicate data compilation. Any additions to the existing disaggregation of source and sink categories should be provided under "Other", if appropriate.

G. Record keeping

51. Parties should gather and archive all relevant inventory information for each year, including all disaggregated emission factors, activity data and documentation on how these factors and data have been generated, including expert judgement where appropriate, and how they have been aggregated for reporting in the inventory. This information should allow reconstruction of the inventory by the expert review teams, *inter alia*. Inventory information should be archived from the base year and should include corresponding data on the recalculations applied. The "paper trail" should enable estimates of emissions and removals to be traced back to the original disaggregated emission factors and activity data. This information should also facilitate the process of clarifying inventory data in a timely manner when the secretariat prepares annual compilations of inventories or assesses methodological issues. Parties are encouraged to collect and gather the information in a single national inventory facility or, at least, to keep the number of facilities to a minimum.

H. Systematic updating of the guidelines

52. Relevant future decisions, once taken by the COP, regarding the reporting of inventories under the Convention should be applied *mutatis mutandis* to these UNFCCC reporting guidelines on inventories, which will be updated accordingly.

I. Language

53. The national inventory report shall be submitted in one of the official languages of the United Nations. Annex I Parties are also encouraged to submit, where relevant, a translation of the national inventory report into English.

Table 1: 1995 IPCC global warming potential (GWP) values[15] based on the effects of greenhouse gases over a 100-year time horizon.

Greenhouse gas	Chemical formula	1995 IPCC GWP
Carbon dioxide	CO_2	1
Methane	CH_4	21
Nitrous oxide	N_2O	310
Hydrofluorocarbons (HFCs)		
HFC-23	CHF_3	11 700
HFC-32	CH_2F_2	650
HFC-41	CH_3F	150
HFC-43-10mee	$C_5H_2F_{10}$	1 300
HFC-125	C_2HF_5	2 800
HFC-134	$C_2H_2F_4$ (CHF_2CHF_2)	1 000
HFC-134a	$C_2H_2F_2$ (CH_2FCF_3)	1 300
HFC-152a	$C_2H_4F_2$ (CH_3CHF_2)	140
HFC-143	$C_2H_3F_3$ (CHF_2CH_2F)	300
HFC-143a	$C_2H_3F_3$ (CF_3CH_3)	3 800
HFC-227ea	C_3HF_7	2 900
HFC236fa	$C_3H_2F_6$	6 300
HFC-254ca	$C_3H_3F_5$	560
Perfluorocarbons		
Perfluoromethane	CF_4	6 500
Perfluoroethane	C_2F_6	9 200
Perfluoropropane	C_3F_8	7 000
Perfluorobutane	C_4F_{10}	7 000
Perfluorocyclobutane	c-C_4F_8	8 700
Perfluourpentane	C_5F_{12}	7 500
Perfluorohexane	C_6F_{14}	7 400
Sulphur hexafluoride	SF_6	23 900

[15] As provided by the IPCC in its Second Assessment Report.

Annex I

NATIONAL INVENTORY REPORT (NIR)
PROPOSED STRUCTURE

EXECUTIVE SUMMARY

General overview, including summary information on emission trends

Chapter 1: INTRODUCTION

- A description of the institutional arrangement for inventory preparation
- Brief description of the process of inventory preparation (data collection, data processing, data storage)
- Brief general description of methodologies used (including information on activity data and emission factors)
- Information on the QA/QC plan including verification and treatment of confidentiality issues where relevant
- General uncertainty assessment, including data on the overall uncertainty for the inventory totals
- General assessment of the completeness

Chapter 2: TRENDS IN GREENHOUSE GAS EMISSIONS

- Emission trends by sources and synthesis analysis
- Emission trends by gas and synthesis analysis
- Emission trends for aggregated GHG emissions, expressed in CO_2 equivalent, and synthesis analysis
- Emission trends for indirect greenhouse gases and SO_2

Chapter 3: KEY SOURCES

- Description of methodology used for identifying key sources
- Reference to the key source tables in the CRF
- Information on the level of disaggregation

Chapter 4: RECALCULATIONS

- Implication for emission levels
- Implications for emission trends
- Justifications for recalculations

Chapter 5: SECTOR ANALYSIS

For each IPCC source category (i.e., at the level of the table Summary 1.A of the CRF, or the level at which IPCC methods are described, or at the level that the Party estimates its greenhouse gas emissions) the following information should be provided:

- Methodological issues (choice of methods/activity data/emission factors, assumptions, parameters and conventions underlying the emission and removal estimates – the rationale for

their selection, any specific methodological issues – refer to appropriate documents and references)
- Uncertainties
- Source-specific verification, if applicable
- Source-specific QA/QC, if applicable
- Source-specific recalculations (including time-series consistency), if applicable

Parties may report some of the information requested above in an aggregate form for some/several source categories if the same methodology, activity data and/or emission factors are used, or in order to avoid repetition of information.

For key source categories, the information should be detailed in order to enable a thorough review of the inventory.

The information should be reported following the IPCC sectors:

5.1 Energy

5.1.1 Fuel combustion, including detailed information on:
- The comparison with the CO_2 reference approach
- Bunker fuels
- Feedstocks
- Military or any other country-specific issue

5.1.2 Fugitive emissions

5.2 Industrial processes

5.3 Solvent and other product use

5.4 Agriculture

5.5 LUCF

5.6 Waste

5.7 Other (if applicable)

In addition, information previously included in the additional information and the documentation boxes of the CRF version for the trial period, should be included and expanded in the NIR, as specified in the appendix to this proposed structure.

Chapter 6: IMPROVEMENTS

- Actions undertaken in response to issues raised in previous reviews
- Future improvement of the inventory (e.g., methodologies, activity data, emission factors, etc.)

REFERENCES

ANNEXES

Annex 1
National energy balance

Annex 2
Additional information to be considered as part of the NIR submission (where relevant)

Annex 3
Detailed methodological description (where relevant)

Annex :
(Any other relevant information – optional)

Appendix

ADDITIONAL SECTORAL REPORTING REQUIREMENTS TO BE INCLUDED IN THE CORRESPONDING SECTION OF THE NIR[1]

Energy

Fugitive fuel emissions:

Coal mining:
- number of active underground mines
- number of mines with drainage (recovery) systems

Oil and natural gas:
- pipelines length
- number of oil wells
- number of gas wells
- gas throughput[(a)]
- oil throughput[(a)]
- any other relevant information

[(a)] In the context of oil and gas production, throughput is a measure of the total production, such as barrels per day of oil, or cubic meters of gas per year. Specify the units of the reported values. Take into account that these values should be consistent with the activity data reported under production in table 1.B.2 of the CRF.

Industrial processes

Metal production:
- More specific information than is required in CRF tables 2(I).A-G could be provided, e.g., data on virgin and recycled steel production.

Potential emissions of halocarbons and SF_6:

- In CRF table 2(II)s2, reporting of "production" refers to production of new chemicals. Recycled substances could be included in that table, but it should be ensured that double counting of emissions is avoided. Relevant explanations should be provided in the NIR.

PFCs and SF_6 from Metal production / Production of halocarbons and SF_6:

- The type of activity data used is to be specified in CRF tables 2(II).C-E (under column "description"). Where applying tier 1b (for 2.C Metal production), tier 2 (for 2.E Production of halocarbons and SF_6) and country-specific methods, any other relevant activity data used should be specified.

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[1] Most of the requirements included in this list were previously reported in the additional information boxes of the CRF tables. As the information is not used directly for the estimation of emissions, participants at the expert meeting recommended that they should be reported in the NIR instead. Some requirements included in this list were not previously covered in the CRF; they emerged as a result of the expert meeting and comments provided by Parties.

Consumption of halocarbons and SF_6:

- With regard to activity data reported in CRF table 2(II).F ("Amount of fluid remained in products at decommissioning"), Parties should provide information on the amount of the chemical recovered (recovery efficiency) and other relevant information used in the emission estimation;
- CRF table 2.(II).F provides for reporting of the activity data and emission factors used to calculate actual emissions from consumption of halocarbons and SF_6 using the "bottom-up approach" (based on the total stock of equipment and estimated emission rates from this equipment). Some Parties may prefer to estimate their actual emissions following the alternative "top-down approach" (based on annual sales of equipment and/or gas). Those Parties should provide the activity data used in that CRF table and provide any other relevant information in the NIR. Data these Parties should provide includes (1) the amount of fluid used to fill new products, (2) the amount of fluid used to service existing products, (3) the amount of fluid originally used to fill retiring products (the total nameplate capacity of retiring products), (4) the product lifetime, and (5) the growth rate of product sales, if this has been used to calculate the amount of fluid originally used to fill retiring products. Alternatively, Parties may provide alternative formats with equivalent information.

Solvents and other product use

- The IPCC Guidelines do not provide methodologies for the calculation of emissions of N_2O from Solvent and other product use. If reporting such data in the CRF, Parties should provide additional information (activity data and emission factors) used to make these estimates in the NIR.

Agriculture

Cross-cutting:

- Parties are encouraged to provide detailed livestock population data by animal type and region in the NIR. This consistent set of animal population statistics should be used to estimate CH_4 emissions from enteric fermentation, CH_4 and N_2O from manure management, N_2O direct emissions from soil and N_2O emissions associated with manure production, as well as emissions from the use of manure as fuel and sewage-related emissions reported in the waste sector.

Enteric fermentation:

- Disaggregated livestock population data (e.g., according to the classification recommended in the good practice guidance);
- Parameters relevant to the application of good practice guidance.

Manure management:

- Information required in the additional information table may not be directly applicable to country-specific methods developed for methane correction factor (MCF) calculations. If relevant data can not be provided in the additional information box, information on how the MCF are derived should be described in the NIR;
- Disaggregation of livestock population (e.g., according to the classification recommended in the good practice guidance).
- Parameters relevant to the application of good practice guidance.

Rice cultivation:

- When disaggregating by more than one region within a country and/or by growing season, provide additional information on disaggregation and related data in the NIR. Where available, provide activity data and scaling factors by soil type and rice cultivar in the NIR.

Agricultural soils:

- The IPCC Guidelines do not provide methodologies for the calculation of CH_4 emissions or CH_4 and N_2O removals from agricultural soils. If reporting such data, Parties should provide in the NIR additional information (activity data and emission factors) used to make these estimates;
- Parties which choose to account for CO_2 emissions and removals from agricultural soils under category 4.D. Agricultural soils of the agriculture sector should report background information on CO_2 emissions and removals estimates from agricultural soils (activity data, emissions factors) in the NIR;
- In addition to the data required in the additional information box of table 4.D, disaggregated values for FracGRAZ according to animal type, and for FracBURN according to crop types, should be provided in the NIR.

Prescribed burning of savannas and field burning of agricultural residues:

- The IPCC Guidelines do not provide methodologies for the calculation of CO_2 emissions from savanna burning or agricultural residues burning. If reporting such data, Parties should provide in the NIR additional information (activity data and emission factors) used to make these estimates.

Waste

Solid waste disposal and waste incineration:

- All relevant information used in the calculation should be provided in the NIR, if it not already included in the additional information box of the CRF.
- Composition of landfilled waste (%), according to:
  - Paper and paperboard, food and garden waste, plastics, glass, textiles, other (specify according to inert or organic waste, respectively)
- Fraction of wastes recycled
- Fraction of wastes incinerated
- Number of solid waste disposal site (SWDS) recovering CH_4

Wastewater handling:

- With regard to data on N_2O from wastewater handling to be reported in CRF table 6.B, Parties using other methods for estimation of N_2O emissions from human sewage or wastewater treatment should provide in the NIR corresponding information on methods, activity data and emission factors used.

Annex II[1]

CRF TABLES

Included in document FCCC/SBSTA/2002/2/Add.3

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[1] As described in paragraph 9 in the introduction to this note, the proposed revised reporting guidelines have two annexes: Annex I, entitled "National inventory report – proposed structure" and annex II "CRF tables". The guidelines text and the annexes will be published as a common document when the guidelines are agreed upon by the SBSTA.